FINAL APPLICATION FOR GROWTH CENTER DESIGNATION

Colchester, Vermont • 23 January 2009

GROWTH CENTER NARRATIVE

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A-3 Colchester Housing Needs Assessment (2005)
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B - Maps

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C - Implementation Tools and Decisions

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C-6 Owls Glen Final Plat Approval
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C-8 Colchester Public Works Standards
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D - Administrative Documentation (to be included with Final Application)

D-1 Municipal Resolution
D-2 Intent to Apply Letter to CCRPC
D-3 Intent to Apply Letter to GBIC
D-4 RPC Letter of Confirmation

1.1. Discuss why a majority of the projected growth cannot reasonably occur within an existing designated downtown, village center or new town center within the municipality, specifically citing the municipality's 20-year projections for population, housing and employment growth and the build-out potential of any designated downtown, village center, or new town center in the municipality.

Colchester's designated new town center at Severance Corners is approximately 10 acres in area (see Figures 1-2 and 1-3). A planned unit development for this site has been permitted and that project is currently under construction. When all phases of the development are complete, the new town center project is expected to provide 152 dwelling units and 86,600 square feet of commercial space. The planned development is comprised of 13 buildings with a total floor area of 302,372 square feet. Phase 1 of the development, which is located on the 10-acre designated new town center, includes five of those buildings containing 50 dwelling units and 46,670 square feet of commercial space.

Based on the household and employment projections described in detail below, Colchester expects to add 1,305 households and 2,301 jobs townwide by 2030. Therefore, its growth center is being planned to accommodate 665 dwelling units and 1,173 jobs, which translates to 478,550 square feet of commercial space.

It is clear that the anticipated growth could not be accommodated within the 10-acre new town center in a manner that would be in keeping with the Town's character. When fully built, Colchester's new town center will be the highest density, mixed-use neighborhood in town with a residential density ranging from five to twelve dwelling units per acre and a FAR (floor area ratio) of at least 0.24. The residential density of the designated new town center exceeds the base density of four dwelling units per acre allowed under the Town's zoning regulations, as it was eligible for a density bonus as a mixed-use project.

To accommodate a majority of anticipated growth through 2030, the residential density would have to exceed 66 units per acre with a FAR in excess of 3.0. That would significantly exceed the maximum density of 12 dwellings per acre allowed under current zoning with the application of for density bonuses and/or transfer of development rights. While it is possible that the new town center may accommodate somewhat greater densities of development than currently anticipated over the 20-year planning period, it is not reasonable to expect that the majority of the Town's growth through 2030 could occur on this 10-acre site.

Figure 1-1: Aerial View of the New Town Center (Fall 2008)

Figure 1-2: Growth Center Location Map

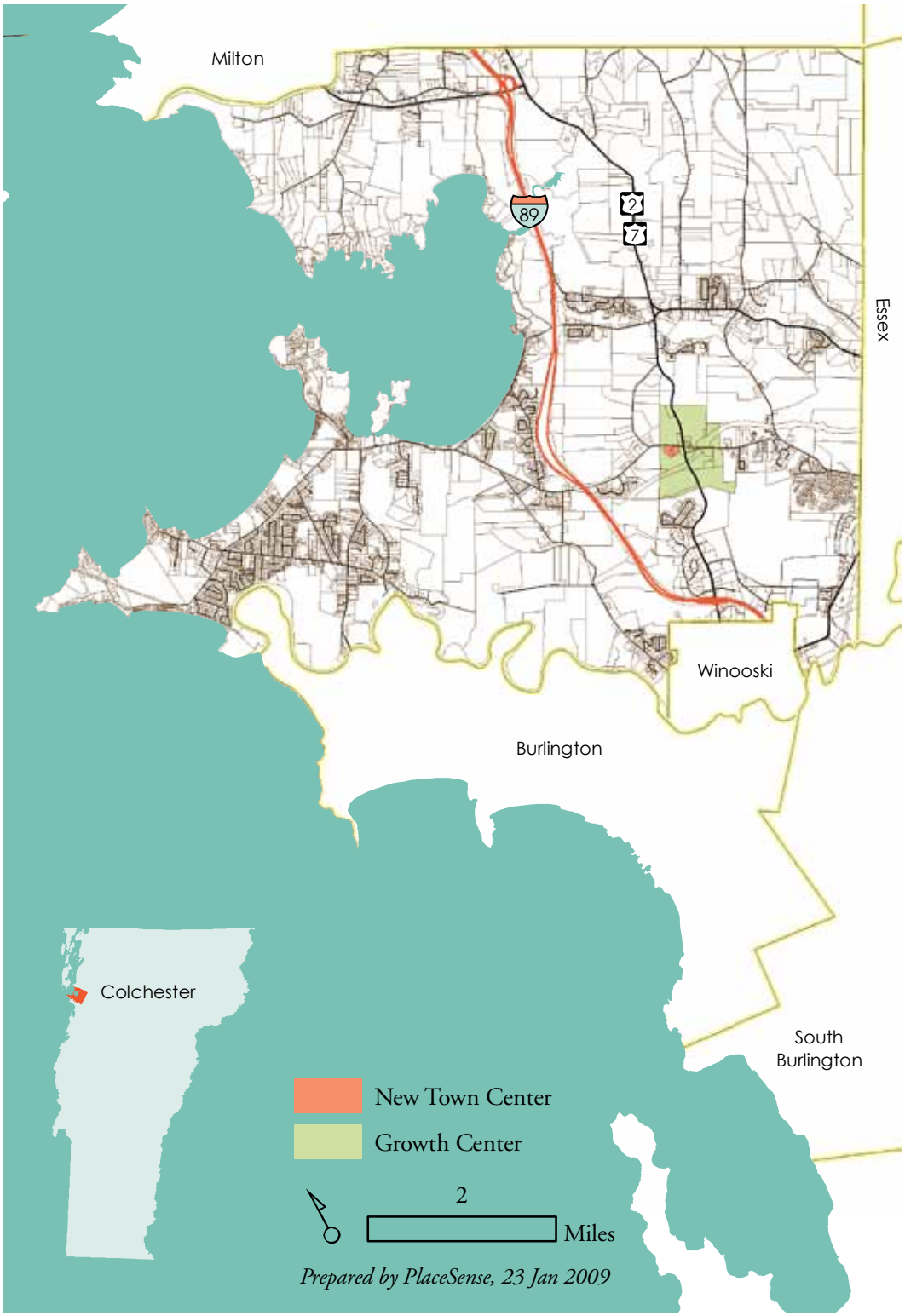


Figure 1-3: Growth Center Detail Map

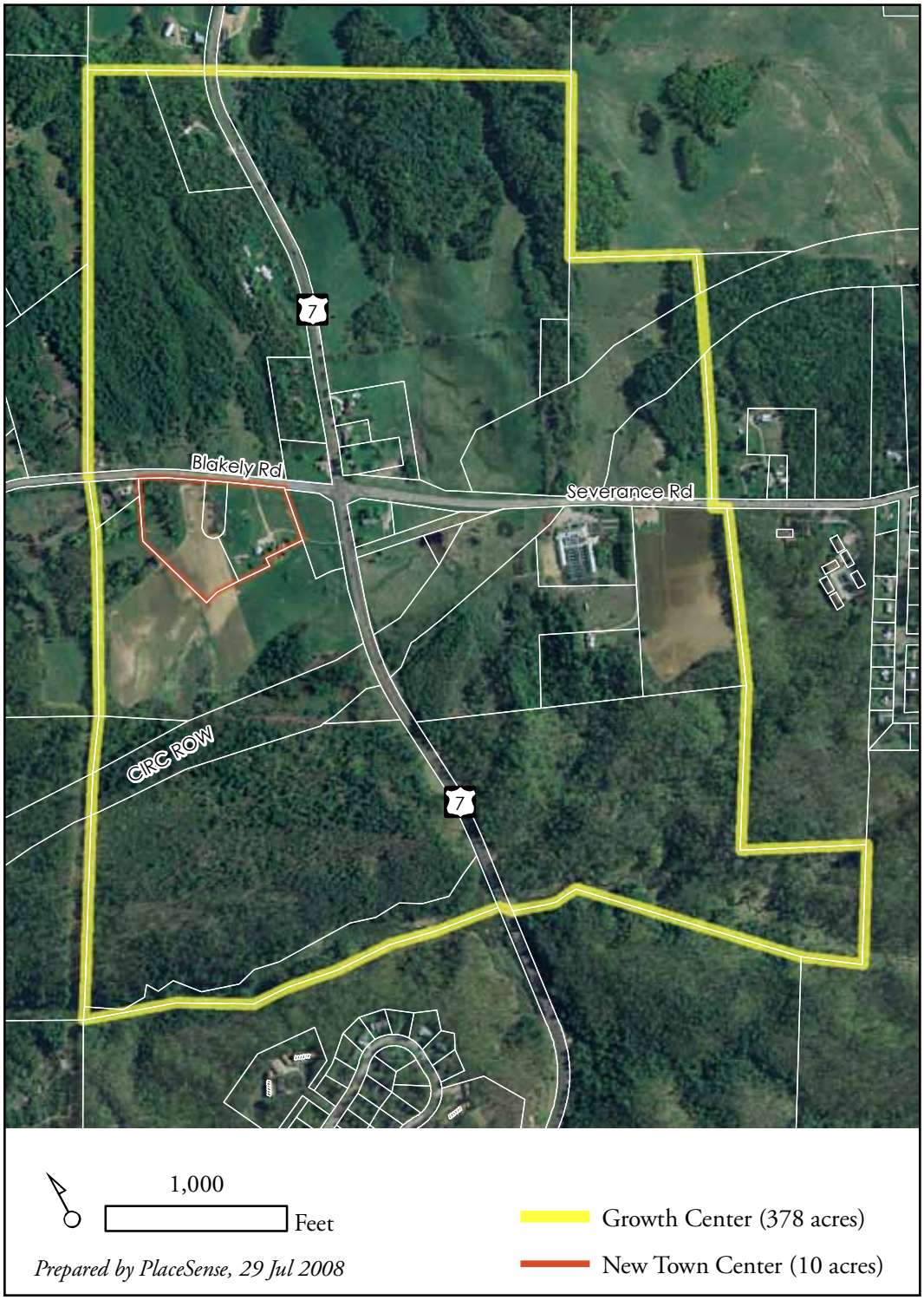


Figure 1-4. Growth Center Targets

	Current	Forecast	Net Increase	GC Target
	2005	*2030*	*2030*	*2030*
Population	17,126	20,227	3,101	1,582
Households	6,775	8,080	1,305	665
Employment	8,150	10,451	2,301	1,173

Derived from CCRPC's population, household and employment projections

Growth Projection Summary

Colchester projects that it will have a net increase of 3,101 new residents, 1,305 new households and 2,301 new jobs in the year 2030. A majority of that growth is being planned to occur within the Town's growth center as shown in Figure 1-4. In order to size the growth center appropriately, these projections have been broken down by development type.

Residential Development

The analysis of residential development and permitting trends described below suggests that the majority of residential development within the growth center will be in multi-unit structures rather than detached single-family homes. Of the 665 dwellings being planned for the growth center over the 20-year planning period, it is anticipated that at least 60 percent (or 400 units) will be in multi-unit structures, while not more than 40 percent (or 265 units) will be detached single-family homes. Given this ratio, an average unit size of 2,000 square feet was used to determine the land area needed to accommodate new dwellings within the growth center.

Commercial Development

Similarly, the analysis of land use and economic development trends described below suggests that the growth center will likely attract office-, retail-, restaurant- and entertainment-based businesses. The average amount of building square footage per job for those types of businesses ranges from approximately 300 to 600 square feet per job. Based on the projected employment by sector, an average figure of 408 square feet per employee was used to determine the need for additional commercial space within the growth center.

Growth Projection Methodology

CCRPC's Municipal Projections

Colchester's household and job growth projections are based on projections prepared by or for the Chittenden County Regional Planning Commission (CCRPC) and Metropolitan Planning Organization (CCMPO). Their regional projections and methodology are summarized in response to Question 3.5.

To develop municipal growth projections, CCRPC used CCMPO's Land Use Allocation Model to allocate its regional forecasts (see Figures 3-6 to 3-8) to 335 traffic analysis zones (TAZs) within the county. A TAZ is a special area delineated to tabulate traffic and land use data. The zones can vary in size, but their boundaries are coincident with municipal boundaries. The model allocates portions of the county's forecasted number of households and jobs to the zones based on an attractiveness index, which is a function of travel times and amount of developable land in each zone. The Town of Colchester contains 24 zones. CCRPC's household and employment forecast for Colchester is shown in Figure 1-5.

Figure 1-5: Colchester's Growth Trends and 20-Year Forecasts

	Historical Data[a]			**Historical Growth Trends** *Ave. Annual Rate of Change*		**Current Year**[b]	**Projected Data**[b]	**Projected Growth Trend** *Ave. Annual Rate of Change*
	1980	*1990*	*2000*	*80-00*	*90-00*	*2005*	*2030*	*05-30*
Population	12,629	14,731	16,986	1.49%	1.43%	17,126	20,227	0.67%
Households	3,872	5,047	6,144	2.34%	1.99%	6,775	8,080	0.71%
Employment	1,894	4,915	8.562	6.50%	5.71%	8,150	10,451	1.00%

[a] *U.S. Decennial Census*

[b] *CCRPC's 2006 Household and Employment Forecast*

Figure 1-5 also compares household and employment forecasts with Colchester's historic growth trends. The projected growth trend for households is consistent with historic growth trends, as Colchester's housing stock will continue to increase at a more stable rate. The projected growth trend for employment is consistent with the historic growth trend, as Colchester will continue to see employment growth in the next 20 years. However, the 2005-2030 average annual rate of change for employment is less than historic employment growth trends because Colchester experienced a dramatic increase in employment between 1980 and 2000 and forecasts predict that employment growth will happen at a more gradual pace over the next 20 years.

Colchester's share of historic and future regional growth is shown in Figure 1-6. According to the forecast, Colchester will have nine percent of the county's future households and six percent of the county's future employment. These are consistent with Colchester's historic share of regional growth.

Figure 1-6: Colchester's Share of Regional Growth

	Historic Shares			**Current Share**	**Forecasted Shares**
	1980	*1990*	*2000*	*2005*	*2030*
Population	11%	11%	12%	11%	11%
Households	10%	10%	11%	11%	9%
Employment	4%	6%	9%	6%	6%

Derived from CCRPC's population, household and employment projections

It should also be noted that since the CCMPO and CCRPC used 2005 as the base year, the projections actually have a 25-year time horizon, rather than 20 years as required by statute. It is reasonable to assume that there are more households and jobs in Colchester today than in the year 2005, although statistics are not available to determine exactly how many. Therefore, the net increase from 2009 to 2030 would actually be less than what is shown in Figure 1-5. Therefore, if the growth center boundary is planned to accommodate 665 households and 1,173 jobs, then it will be slightly larger than necessary. In fact, if the annual average rate of change is accurate in Figure 1-5, then the household projections are over inflated by 2.84 percent (19 households) and the employment projections are over inflated by four percent (47 jobs).

Projections from Colchester's Interim Application

These projections are significantly less than what was presented in Colchester's application for interim benefits under the growth center program. Both sets of numbers were derived from CCRPC's projections. However, the numbers in the interim application were inaccurate due to a basic math error. When calculating the amount of development that would need to be accommodated within the growth center, the total number of households and jobs anticipated by 2030 was used rather than the net increase.

Residential Development

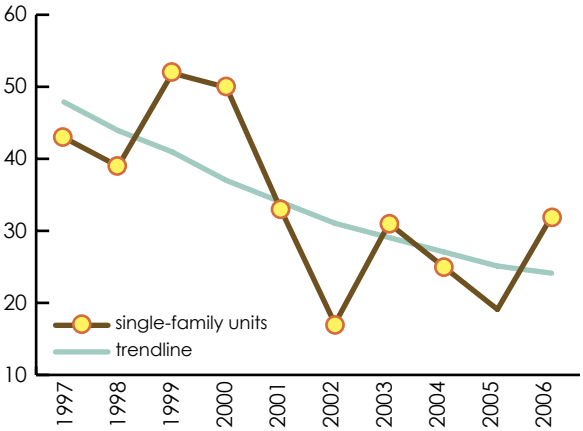
An analysis of the Town's building permit data was conducted to determine the anticipated housing unit demand by type. Housing unit construction by type is shown in Figure 1-7 for the 10 years between 1997 and 2006.

Figure 1-7: Dwelling Unit Construction by Type in Colchester

Year	Total Dwellings	New Construction			
		Total	*Single-Family*	*Duplex*	*Multi-Family*
1997	6,546	84	43	8	33
1998	6,630	41	39	2	
1999	6,671	56	52	4	
2000	6,727	70	50	14	6
2001	6,797	61	3	24	4
2002	6,858	76	17	22	37
2003	6,934	76	31	45	
2004	7,010	73	25	30	18
2005	7,083	39	19	20	
2006	7,122	108	32	14	62
Total		**684**	**341**	**183**	**160**

Source: Town building permit records

Figure 1-8: Single-Family Home Construction



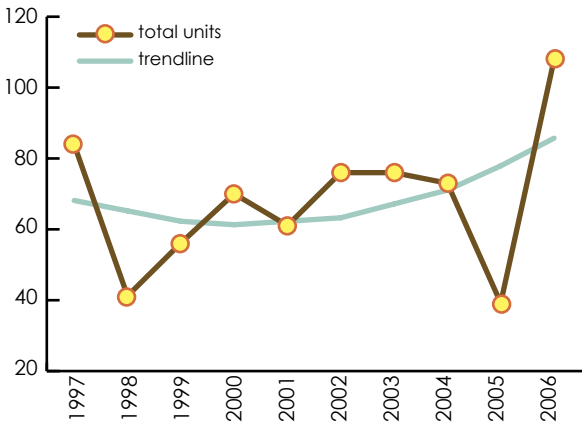
Over this data period, there were 341 single-family units built and 343 multi-family units built (including duplexes). In other words, approximately 50 percent of all dwelling units are single family; the rest are duplexes and multi-family units. The split between the multi-family and duplex is 47 to 53 percent.

The growth trend for multifamily units is more difficult to predict due to the volatility of the past data. As can be seen in Figure 1-7, there are years when no multi-family units are built, but when they are, a large number are built all at once. Single-family home data, by contrast, is more consistent. What the single-family data do show is that the rate of single-family home construction has been on a steady decline in Colchester over the past 10 years.

The regional projections and total residential construction data indicate that total home construction is on a slow and steady increase. This is consistent with the 0.71 percent annual average increase of households that the CCRPC forecasted for the next 25 years.

Both the 1990 and 2000 Census results indicated that around 30 percent of the Town's housing stock was in multi-unit structures. Given recent construction trends, this percentage has certainly increased and is expected to continue to grow.

Figure 1-9: Total Housing Construction



Since single-family home construction is on a steady decline and total residential construction is on the increase, and the ratio between single-family and multi-family construction in Colchester is currently about 50:50, then it is reasonable to assume that the rate of multi-family construction (including duplexes) will increase moving forward over the next two decades. Further, it is expected that the number of multi-family units located in the proposed growth center will be greater than 50 percent for the following reasons:

- Household size is decreasing and demand for smaller units is increasing;
- The baby boomer generation is becoming the retirement generation, which creates a housing market segment that looks for low maintenance living;

- The proposed growth center promotes a high density settlement pattern, therefore less demand for single family homes will occur there;
- The nature of the growth center will create larger incentives for developers of multi-unit residential and mixed-use buildings within the growth center than for developers of single-family homes.

For these reasons, it is reasonable to assume that the ratio of single family units to multi-family units should be higher in the growth center 20 years from now than the current town-wide ratio. Thus, an increase to at least 40:60 is practical. Therefore, a ratio of 40:60 was used to allocate the 665 projected residential units within the growth center by type (266 single family units to 399 multifamily units).

Commercial Development

The CCMPO estimates that there will be 2,301 new jobs in Colchester by the year 2030. If a majority of these jobs will be located in the growth center, the question becomes what type of jobs will be located there so that the amount of employee space can be calculated and, by corollary, an adequate amount of land for the growth center can be allocated.

The first step in estimating the type of jobs that will be located in the proposed growth center is to review the Town's zoning. The proposed growth center is zoned as the General Development 3 (GD-3) district. The purpose of this zoning district is to:

> Provide compact mixed use development within the Severance Corners neighborhood. Businesses and residential uses should be developed to complement each other. Pedestrian accessibility, aesthetics and public spaces are to be emphasized; Development should be permitted and encouraged as long as it is complimented, within each development unit, by public amenities, open space, and aesthetic site and building design. (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 3A, Page 3)

Essentially the growth center zoning encourages retail, office commercial, general commercial, restaurants, medical facilities (except hospitals), personal and professional services, and other types of pedestrian-scale commerce. The zoning prohibits wholesale commercial activity, retail larger than 10,000 square feet, manufacturing activities, automobile sales and repair, nearly all drive up commercial activities, machinery repair and other activities that would not be compatible with a pedestrian friendly, mixed use residential/commercial/office environment. (See Attachment C-1A: Table of Uses)

The employment that will be occurring in the proposed growth center will therefore be compatible with these permitted uses. This generally leads to office-based employment, retail-based employment, and restaurant and entertainment-based employment.

In 2007, there were 563 employers in Colchester employing 8,625 employees. This is an increase of 111 percent over the past 10 years. In 1988, Colchester had 4,071 jobs and 292 employers in Town. This includes all employment including government employees, but is limited to employees covered by unemployment insurance.

Figure 1-10: Comparison of Employment Growth

	Private Sector Employment (2007)	% Change (1988 - 2007)
Vermont	251,361	19%
Chittenden Co.	80,069	24%
Colchester	7,650	111%

Source: Quarterly Census of Employment and Wages

Figure 1-11: Employment by Type in Colchester

	All Private Employment	Manufacturing	Construction	All Services	*Retail*	*Information*	*Education and Health Services*	*Leisure and Hospitality*
1988	3,633	1,216	609	2,417	480	43	941	406
1989	3,910	1,301		2,609	481	43	1,057	406
1992	4,865	1,146		3,720	485	128	1,320	510
1995	6,406	1,404	742	50,02	811	166	1,645	668
1998	7,246	1,409	768	5,837	988	276	1,846	680
2001	8,065	1,417	766	6,648	1,089	305	2,134	608
2004	7,705	1,192	709	6,512	976	342	2,049	676
2007	7,650	1,235	685	6,415	1,017	354	2,155	773
% Change (88-07)	111%	2%	12%	165%	112%	723%	129%	90%

Source: Quarterly Census of Employment and Wages

Figure 1-12: Service Employment in Colchester by Type

	1989	1992	1995	1998	2001	2004	2007
Retail	481	485	811	988	1,089	976	1,017
Information	43	128	166	276	305	342	354
Education & Health	1,057	1,320	1,645	1,846	2,134	2,049	2,155
Leisure & Hospitality	406	510	668	680	608	676	773

Source: Quarterly Census of Employment and Wages

All private sector employment was separated from all employment data and analyzed. While some government employment will likely occur in the growth center, a large majority will be private. A significant majority of the data on government sector jobs at the local level is made up of employees at public schools and the growth center is not planned to include a public school. Therefore, government employment data was not included in the analysis.

All private employment in Colchester increased by 111 percent. By comparison, the State of Vermont and Chittenden County only increased jobs by 19 and 24 percent respectively. This means that Colchester has received a large percentage of the county's total employment growth over the past 10 years. Since private sector jobs and total jobs increased by approximately the same amount, there was no measurable net increase in government jobs in Town. Manufacturing stayed relatively flat at two percent growth over 10 years. Construction increased by 12 percent over this same period. Service sector employment increased by 165 percent and explains a majority of the employment increase by category of job.

Given the amount of service sector job growth and the permitted types of commercial activity within the GD-3 district, service sector employment was further analyzed.

- **Information.** The largest increase in service sector employment is in the information sector. For Colchester, a majority of these jobs are in the broadcasting industries such as television and radio studios. These activities are permitted in the growth center. Some information services, such as printing and publishing, are not permitted in the proposed growth center. The prohibited activities make up approximately 15 to 20 percent of the total.
- **Retail.** Retail services grew by 112 percent. Several retail activities are not allowed in the proposed growth center. These include: sales of automobiles, building materials, gasoline, and any type of retail store that would typically demand more than 10,000 square feet. For the purposes of this analysis, it was assumed that the types of retail businesses that would typically demand over 10,000 square feet include full size grocery stores and home furnishings. Employment data is not always broken down into convenient categories that align with the purposes of this analysis. After reviewing retail data, 100 percent of employment for automobile sales, building materials, home furnishings, and 50 percent of grocery food sales, is assumed to be prohibited from the growth center. In 2007, this amounted to 347 jobs or 34 percent of the Town's retail employment.
- **Education and Health Services.** Education and health service sector grew slightly faster than the Town's total employment average. This does not include public school employment. A majority of this growth likely occurred at Fanny Allen Hospital, Visiting Nurse Association (VNA) and St. Michael's College. Those locations will likely absorb much of the future employment growth in this sector. Hospitals are prohibited in the proposed growth center, but all other education and health care services are permitted. Future health and education service jobs will be distributed throughout the Town and the percentage that the growth center will absorb can not be determined from an analysis of existing data. Since the growth center is planned to absorb 51 percent of all employment, then 51 percent is used as an estimate at this stage.

- **Leisure and Hospitality Services.** This sector grew slightly less than the Town average, but still at a healthy rate. Leisure and hospitality jobs include performing arts, spectator sports, accommodations, entertainment, and eating and drinking establishments. The growth center zoning prohibits performing arts and entertainment space over 300 seats, and most accommodation businesses (inns will be allowed). Eating and drinking establishments (restaurants and bars) are permitted and these types of businesses accounted for 73 percent of the total jobs in 2007. The proposed growth center will be expected to absorb a larger percentage of the Town's employment growth in this sector.

A total of 2,301 net new jobs are expected in Colchester by 2030. Statute requires that the growth center be large enough to accommodate 51 percent of these jobs. Since zoning prohibits construction and manufacturing jobs, the growth center must be large enough to accommodate 1,173 service sector jobs. As mentioned above the service sector includes a wide variety of jobs from health and education services to professional services, to retail and hospitality services. Each of these jobs requires a different amount of square footage per employee to operate.

The percentage of each major service sector was analyzed to determine the number of future jobs in each sector that would be located in the growth center. Each major service sector job was projected forward using logistical regression on the share of the service sub-sectors to total local employment composition. Logistical regression analysis has a common application in econometrics and statistics. It is one of several types of asymptotic growth curves and is an improvement on linear regression because it assumes that employment will eventually reach an upper limit. The equation of a line of known data plotted on a graph is used to project future occurrences within a certain level of statistical accuracy. The best-fitting regression equation is selected based upon the R2s for each equation. The R2 or coefficient of determination is a standard statistic used in examining the fit of an estimated line to the data points. Essentially, it is a ratio of the residuals, or errors due to the regression line to the total error within a data set. The closer the ratio is to one, the better the estimated line fits the data set. The R2 values for the service sector jobs in Colchester become weak after 10 years. So since these are the best available data at this time, projections for sub-sectors of employment were not made further out into the future.

Figure 1-13: Commercial Square Footage by Economic Sector

	Square Foot Factor	% of Each Sector	Total Jobs in Growth Center	Square Feet Required
Retail	515	13%	152	78,532
Information	400	5%	58	23,460
Education & Health	400	28%	328	131,376
Leisure & Hospitality	625	10%	117	73,313
Professional	333	25%	293	97,652
General	333	19%	222	74,216
Total	**408**		**1,173**	**478,549**

Source: Federal Highway Administration and Crane Associates

Build-Out Summary

The build-out analysis completed for Colchester's 378-acre growth center indicates that sufficient capacity exists to accommodate a majority of the Town's growth over the 20-year planning period under current zoning (see Figure 1-15).

There are 319 dwelling units and 54,400 square feet of commercial space in the permitting process or under construction within the growth center at this time. This development is occurring on three sites totaling 188 acres. That accounts for 48 percent of the residential development and 11 percent of the commercial development required to meet the growth center's targets.

The build-out analysis looked at the remaining land within the growth center to determine if it could reasonably accommodate an additional 346 dwelling units and 424,150 square feet of commercial space. Of the remaining 190 acres, 45 are comprised of public rights-of-way and were excluded from the analysis. A nearly eight-acre state-owned parcel along Sunderland Brook was also dropped from the analysis.

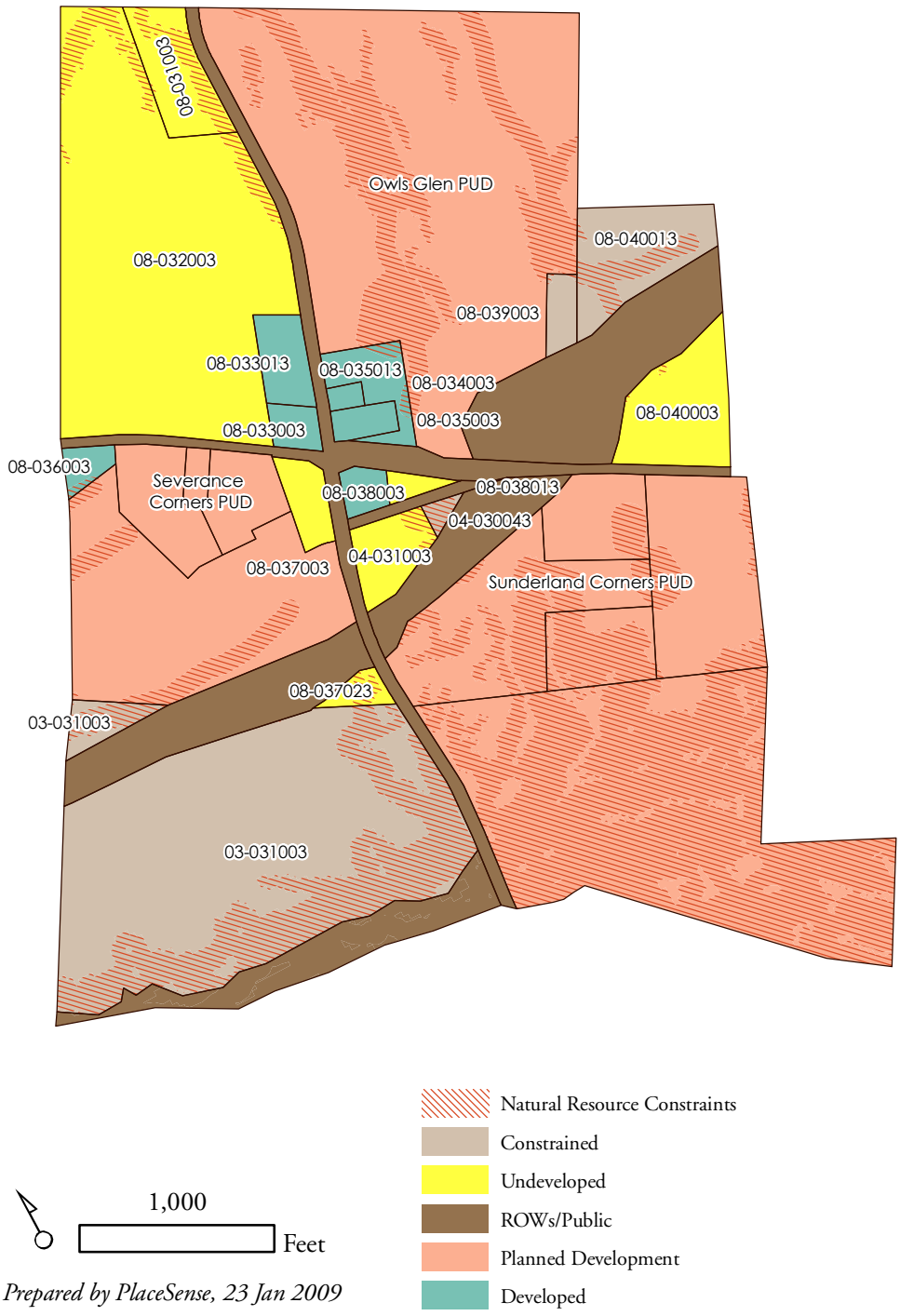
The remaining land was divided into three groups: undeveloped land with few development constraints (64 acres), already developed property (11 acres), and undeveloped land with significant development constraints (63 acres). A build-out analysis was completed for land in the first two groups, as described below. (see Figures 1-14 and 1-15).

The build-out analysis indicates that on the 64 undeveloped acres, there is the potential for 208 dwelling units based on a development density of one unit per 10,000 square feet of developable land. That density could be increased through bonuses and transfer of development rights to a maximum density of 12 units per acre, resulting in a maximum of 569 dwelling units. Depending on the amount of residential development, these 64 acres could also accommodate between 0.8 and 1.6 million square feet of commercial space. The build-out analysis shows that the remaining 346 dwelling units and 424,150 square feet of commercial space can be accommodated on these 64 acres.

It is likely that a significant amount of the additional development required will occur on those 64 acres of undeveloped land. However, it should not be assumed that all those lands will be developed at their absolute maximum potential. Some additional development should be anticipated to occur elsewhere in the growth center. As shown in Figure 1-15, there is significant redevelopment potential on the 11 acres of already developed property. It is reasonable to assume that over the 20-year planning period, some of these single-family residential properties will be converted, subdivided or otherwise redeveloped at greater intensities.

The 11 acres of previously developed land have the potential for 37 dwelling units based on a development density of one unit per 10,000 square feet of developable land. That density could be increased through bonuses and transfer of development rights to a maximum density of 12 units per acre, resulting in a maximum of 93 dwelling units. Depending on the amount of residential development, those 11 acres could also accommodate between 155,400 and 267,400 square feet of commercial space. Therefore, the build-out analysis shows adequate potential to meet growth center targets when the 64 acres of undeveloped land and 11 acres of land with redevelopment potential are considered together.

Figure 1-14: Growth Center Parcel Map



Prepared by PlaceSense, 23 Jan 2009

Figure 1-15: Growth Center Build-Out Potential

Parcel #	Total Acres	Constrained or Open Space	Developable Acres	Lot Coverage (sqft)	Max Building Footprint (sqft)	Building Floor Space (sqft)	Dwelling Units (Base)	Dwelling Units (Bonus)	Dwelling Units SF (Base)	Dwelling Unit SF (Bonus)	Commercial SF (Base)	Commercial SF (Bonus)
Planned Development[1]												
Severance PUD	34.16	8.54	25.62	781,205	355,100	1,065,300	112	307	224,000	614,000	841,300	451,300
Sunderland PUD	86.91	55.35	31.56	962,328	437,400	1,312,200	137	378	274,000	756,000	1,038,200	556,200
Owls Glen PUD	66.99	18.66	48.33	1,473,678	669,900	2,009,700	211	579	422,000	1,158,000	1,587,700	851,700
Subtotal	**188.06**	**82.55**	**105.51**	**3,217,211**	**1,462,400**	**4,387,200**	**460**	**1,264**	**920,000**	**2,528,000**	**3,467,200**	**1,859,200**
Undeveloped Land												
08-032003-000	45.22	11.31	33.92	1,034,136	470,100	1,410,300	148	406	296,000	812,000	1,114,300	598,300
04-031003-000	3.24	0.81	2.43	74,096	33,700	101,100	11	29	22,000	58,000	79,100	43,100
08-031003-000	4.80	1.51	3.29	100,319	45,600	136,800	14	39	28,000	78,000	108,800	58,800
08-037003-000	2.10	0.53	1.58	48,025	21,800	65,400	7	18	14,000	36,000	51,400	29,400
08-037023-000	1.06	0.44	0.62	18,905	8,600	25,800	3	7	6,000	14,000	19,800	11,800
08-038013-000	0.76	0.19	0.57	17,380	7,900	23,700	2	6	4,000	12,000	19,700	11,700
08-040003-000	7.17	1.79	5.38	163,971	74,500	223,500	23	64	46,000	128,000	177,500	95,500
Subtotal	**64.35**	**16.57**	**47.78**	**1,456,832**	**662,200**	**1,986,600**	**208**	**569**	**416,000**	**1,138,000**	**1,570,600**	**848,600**

[1]*Potential dwelling units and commercial square footage is maximum allowed under zoning, not what has been permitted/approved for these sites.*

Figure 1-15: Growth Center Build-Out Potential (con't)

Parcel #	Total Acres	Constrained or Open Space	Developable Acres	Lot Coverage (sqft)	Max Building Footprint (sqft)	Building Floor Space (sqft)	Dwelling Units (Base)	Dwelling Units (Bonus)	Dwelling Units SF (Base)	Dwelling Unit SF (Bonus)	Commercial SF (Base)	Commercial SF (Bonus)
Developed Land[3]												
08-033003-000	1.30	0.33	0.98	29,730	13,500	40,500	4	11	8,000	22,000	32,500	18,500
08-033013-000	2.64	0.66	1.98	60,374	27,400	82,200	9	23	18,000	46,000	64,200	36,200
08-034003-000	0.50	0.13	0.38	11,435	5,200	15,600	2	4	4,000	8,000	11,600	7,600
08-035003-000	1.22	0.31	0.92	27,900	12,700	38,100	4	10	8,000	20,000	30,100	18,100
08-035013-000	2.97	0.74	2.23	67,921	30,900	92,700	10	26	20,000	52,000	72,700	40,700
08-036003-000	1.11	0.28	0.83	25,385	11,500	34,500	4	9	8,000	18,000	26,500	16,500
08-038003-000	1.21	0.30	0.91	27,671	12,600	37,800	4	10	8,000	20,000	29,800	17,800
Subtotal	**10.95**	**2.74**	**8.21**	**250,416**	**113,800**	**381,400**	**37**	**93**	**74,000**	**186,000**	**267,400**	**155,400**
Total	**263.36**	**101.86**	**161.50**	**4,924,459**	**2,238,400**	**6,755,200**	**705**	**1,926**	**1,410,000**	**3,852,000**	**5,305,200**	**2,863,200**

[3] *The potential dwelling units and commercial square footage represents the maximum redevelopment potential of these parcels.*

The build-out potential of the remaining 63 acres of undeveloped land with significant development constraints cannot be accurately calculated using this methodology. Density in Colchester is based on the amount of developable land on a parcel. The constraints on these properties have not been delineated to the level of detail necessary to reasonably estimate the amount of developable land available. While it is anticipated that these lands have some development potential, it is not likely to be a significant percentage of the growth occurring over the 20-year planning period.

The build-out analysis shows that development of these 63 acres is not necessary for Colchester to meet its growth center targets. However, the Town feels that they are an integral part of the growth center, including the 54-acre Robenstein parcel in the southwest corner. By including that land, the Town will have an opportunity to ensure that any development that does occur is integrated into the area's overall development pattern to the greatest extent feasible. If removed from the growth center, that land would become an island (the southern boundary of the growth center is a ravine that separates it from the Exit 16 planning area), not a part of any of the town's neighborhoods, and any development on them would be isolated.

Build-Out Methodology

Natural Resource Constraints and Open Space Requirements

The first step in the build-out analysis was to estimate the amount of "buildable land" within the growth center. Colchester's land use regulations base allowable density on buildable rather than total acreage. Therefore, land characterized by steep slopes (>20%), wetlands plus a 50-foot buffer and an 85-foot stream buffer was subtracted from total acreage.

Colchester's zoning regulations establish an open space requirement of up to 25 percent for planned unit developments (PUDs). It is anticipated that most of the major development within the growth center will use the Town's PUD provisions in order to provide flexibility for the design of mixed-use projects. Therefore, the total buildable acreage was calculated as the greater of a 25 percent reduction in total lot area or the removal of the identified natural resource constraints. This figure is shown in the "Developable Acres" column of Figure 1-15.

Lot Coverage and Building Area

Within the General Development 3 (GD-3) district, Colchester allows for lot coverage of up to 70 percent. Lot coverage includes buildings, parking areas, drives – all impervious surfaces. The next steps in the build-out analysis were to take the amount of buildable land, apply the lot coverage standard and allocate the allowed coverage between buildings and parking/roads.

Parking requirements can significantly affect the amount of development that will be permitted within the growth center. Colchester's zoning regulations require two spaces for each dwelling. For commercial uses, the Town has established standards based on the type of use and its square footage (see Attachment C-1: Zoning Regulations, Article 10, Section 1, Pages 11-15). However, within the growth center it is anticipated that surface parking requirements will be reduced through shared parking and parking under or within structures, as is encouraged in the zoning regulations. Therefore, a general standard of one surface parking space per 1,000

square feet of building area was used in the build-out analysis. Further, each "parking space" was assumed to be 400 square feet in area, which is twice the area of an individual parking space, in order to account for internal access roads, service areas, loading areas, etc.

These calculations return the maximum building footprint as shown in Figure 1-15. That figure was then multiplied by three to calculate the maximum amount of building floor space allowed under the zoning regulations. Colchester's zoning has a maximum building height of 40 feet in the GD-3 district, which could accommodate a four-story building. Additionally, the Development Review Board may waive height requirements for structures up to 45 feet in the General Development districts. However, for the purposes of the build-out analysis a maximum height of three stories was used.

It is clear from the deliberations over the new town center project (Severance Corners PUD) that the Planning Commission and residents have some concerns that four-story buildings may be out of character in this part of Colchester. Further, while a few four-story buildings may be built, it is unlikely that there will be demand for as much upper-story space as is allowed under the zoning during the 20-year planning period. The new town center project will probably be typical of other projects in the growth center and it consists of buildings of varying heights, from one to four stories tall, which is also typical of the development pattern in many traditional downtowns. The Town anticipates that most of the buildings within the growth center will be two- and three-stories in height with a few one- or four-story buildings.

> Building heights & scale. Buildings should vary yet respect the height and scale of sequence set by neighboring buildings. One, two, three and four story buildings (up to a maximum of 40 feet in height) are acceptable. The height of a building may be increased if the project is developed as a Planned Unit Development (PUD). (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03F1(b), Pages 4-5)

Dwellings and Commercial Space

The final step in the build-out analysis is to allocate building floor space between residential and commercial uses. Colchester's zoning allows for a maximum residential density of one unit per 10,000 square feet of buildable land. Within the Town's regulations, however, there is the possibility of increasing that density through bonuses or transfer of development rights (TDR) up to 12 dwelling units per acre of buildable land.

Figure 1-15 shows the base number of residential units based on the allowable density of the GD-3 district and the maximum allowed through the bonus and TDR provisions. Due to the anticipated 40:60 ratio between single-family and multi-family units, it was assumed that the average dwelling unit within the growth center would be 2,000 square feet. The amount of residential square footage was then calculated for both the base and bonus scenarios. Those figures were subtracted from the total building square footage to return the maximum potential for commercial square footage.

Build-Out Analysis from Colchester's Interim Application

The build-out analysis submitted with Colchester's application for interim benefits was completed by CCRPC using CommunityViz. That scenario maximized development potential

to the greatest extent possible in order to accommodate the inflated projections of population and employment growth that resulted from a math error. The new analysis shows less development potential, but tries to more accurately account for natural resource constraints, open space requirements, existing and planned development, and desired character within the growth center. As evidenced by this analysis, Colchester is confident that it can meet the 20-year growth targets within this compact area in a manner that will be compatible with the Town's character and that will protect important resources.

2.1 Summarize the amount of land included within the proposed growth center and its build-out potential.

The proposed growth center encompasses 378 acres, including the Town's 10-acre new town center. Detailed build-out results are presented in Section One, along with a map of the growth center (see Figures 1-3 and 1-15).

Figure 2-1: Aerial Views of the Growth Center (looking west down Blakely Road)

2.2 Explain how the municipality arrived at the proposed growth center boundary and determined how much land was needed to meet the requirement of accommodating a majority of projected growth over the 20-year planning period, specifically justifying how the proposed boundary achieves the program goal of a compact center that does not encompass an excessive area of land.

Colchester has been planning for a growth center at Severance Corners for a number of years. Consideration of future development at this intersection can be traced back more than 20 years, when the plans for the Circumferential Highway, with a on-off ramp at this location, were developed. The Town zoned this land to its highest intensity, mixed-use district, General Development 3, more than 10 years ago. Similarly, this area has been designated as the Town's sole growth center in the Colchester Town Plan since the early 2000s.

The boundaries are to some extent dictated by natural features (Sunderland Brook and the Sunny Hollow ravine to the south) and existing development patterns (highway rights-of-way and existing neighborhoods to the east and west), but were also drawn to steer development away from areas of prime farmland (Shipman Hill to the west and the conserved Button farm to the north).

The growth center's 378 acres is a modest amount of land, 1.6 percent of the Town's total land area. During the review of Colchester's interim growth center application, it was recommended that the Town consider expanding the boundary due to concerns about accommodating anticipated growth. As discussed previously, the projections were overstated and as the build-out analysis shows, there is adequate land area within the growth center to accommodate anticipated growth.

During the Planning Coordination Group's review of the town's preliminary application, concerns were raised about including the two southern-most parcels within the growth center boundaries. On the eastern side of Route 2/7, approximately 50 acres of forestland was considered part of the Sunderland Corners PUD. No development will be occurring within this steep forested area. As a condition of approval, the developer will be constructing a public trail that will wind through the forest. These lands will provide a recreational and open space resource for residents and workers within the growth center and townwide. These lands also connect to the town-owned Sunny Hollow natural area across Sunderland Brook, preserving a significant area of wildlife habitat and a travel corridor along the stream.

On the west side of the highway, is the 54-acre Robenstein property. While not as steep as the land to the east, the property contains the rare sand plains natural community and a deer wintering area along with some slopes and possibly wetlands along Sunderland Brook. The current property owner has expressed his intent to develop the property to whatever extent will be allowed under local and state regulations. It is the Town's position that including this parcel within the growth center would likely result in higher quality development occurring on this property, ideally by clustering the development on the northern portion of the parcel while conserving those lands characterized by important natural resources. While the amount of development potential is not considered significant, as compared to the overall growth planned for the growth center, it should be integrated into the growth center neighborhood to the greatest extent feasible given the limitations imposed by resource constraints and the Circumferential Highway right-of-way.

The current boundaries are also a result of nearly two decades of political debate. The Town feels that any changes to the boundary at this point, whether to add or remove lands, would re-open consideration of the boundary in its entirety with the potential to bog down planning efforts in further contentious negotiations.

2.3 Identify the steps that the municipality is taking to manage any necessary extensions of infrastructure to parts of the municipality that are currently not served by water or wastewater in a manner that will discourage a scattered or low-density pattern of development.

Municipal wastewater service is currently available in the Exit 16, Severance Corners and Fort Ethan Allen (Route 15) neighborhoods. Municipal sewer also serves a small portion of the Colchester Village neighborhood: the Breezy Acres and Hillcrest mobile home parks on Roosevelt and the Creek Farm Plaza. Five water districts provide water in various areas of town. Water and wastewater infrastructure is discussed in detail in response to Question 6-1 (see Figure 6-2: Water and Sewer Service Map, Page 6-3).

These areas served by municipal wastewater are the Town's priority areas for growth as stated in the land use chapter of the Town Plan, as well as historic village areas that required sewer to rectify pre-existing problems. The Town Plan (Attachment A-1) includes the following policy statements to guide decisions about provisions of infrastructure:

> Care should be taken to develop priorities for wastewater allocation and update the Town's wastewater management plan accordingly during the term of this plan. The Town's Sewage Ordinance should prioritize wastewater allocation based on land use goals instead of a first-come first-served method of distributing allocation. (Page 100)

> Sewer service areas shall be planned to implement the community's land use planning goals as provided within this plan and to maximize the cost-effectiveness of investments. (Page 101)

The Town has already acted to manage necessary infrastructure extensions in a manner that will discourage development in agricultural areas. Due to the failure of the on-site septic systems serving the mobile home park on Creek Farm Road, the state required a sewer line be extended north from Exit 16. This line provides service to the growth center. In order to prevent connections outside the growth center, a force main was installed north of the growth center along Poor Farm Road. Connections cannot be made to a force main.

Colchester's five water districts are independent entities that complete their own needs assessments and infrastructure maintenance. The Town, however, does have control over where the water will extend through the implementation of its subdivision regulations. Any extension of water lines in Colchester will trigger a major subdivision. At that point, all subdivision regulations are enforced including the following provision:

> Proposed subdivisions shall conform to the Comprehensive Plan and all bylaws of the Town including the Town Zoning Regulations, Official Map,

and standards herein. (Attachment C-2: Colchester Subdivision Regulations, Section 318, Page 28)

The policies of the town plan and zoning regulations will then be enforced to prevent extensions of water infrastructure in any areas of the town that it is not planned to receive such development.

3.1 Identify all designated downtowns, village centers and new town centers in the applicant municipality and adjacent municipalities.

There is a single new town center in the Town of Colchester. Burlington and Winooski each have a designated downtown, while Essex Junction, Williston and Jericho have designated village centers (see Figure 3-2).

3.2 Identify all major retail areas (downtowns, shopping centers, malls, big-box stores, etc.) within the applicant municipality and adjacent municipalities, specifically noting which currently function primarily as community-serving retail areas and which serve primarily as destination retail areas.

Summary

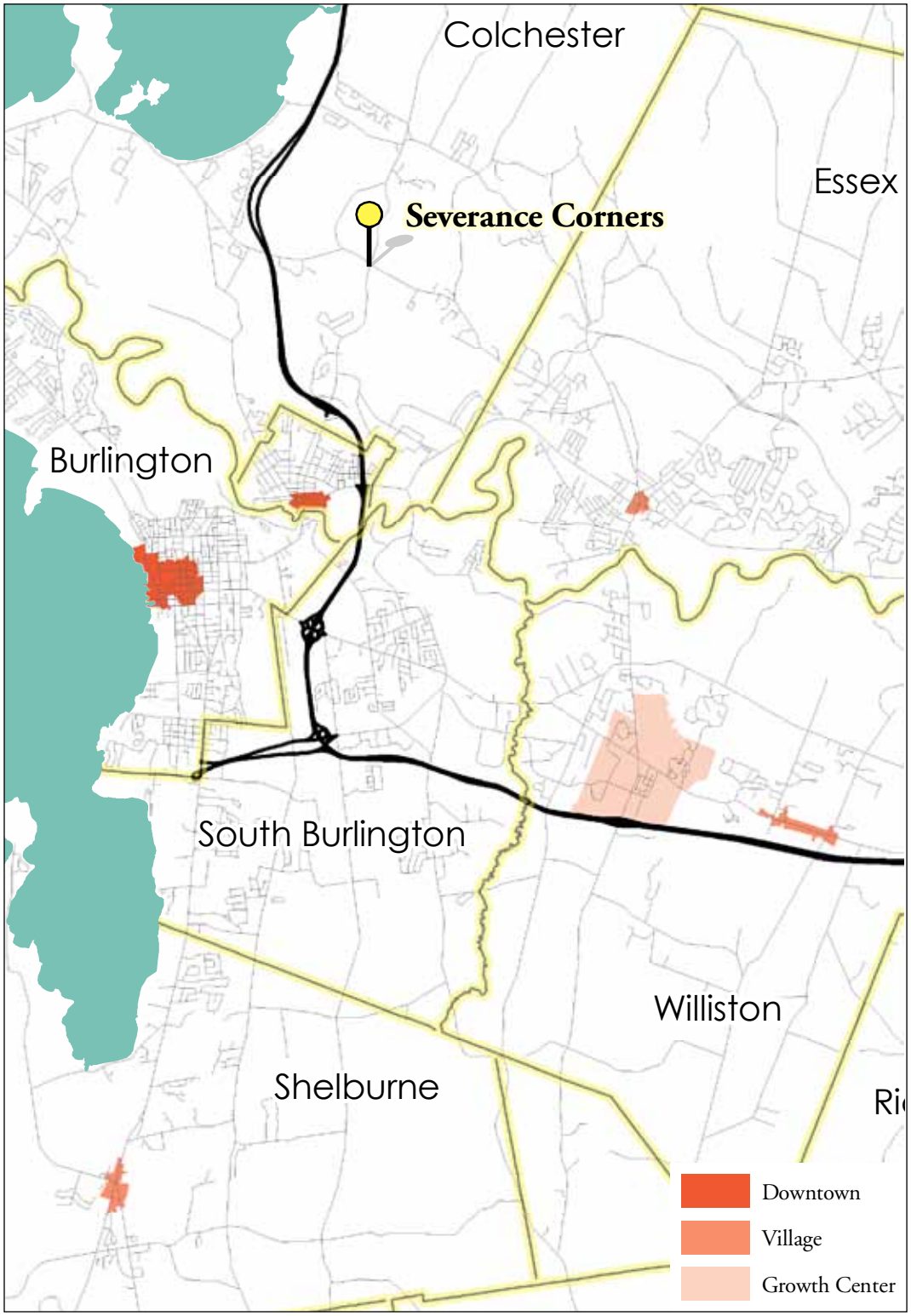
Figure 3-1 shows major retail activity in Colchester and adjacent municipalities. Given that Chittenden County is home to the top four retail centers in the state, documenting the level of activity in each area is an overwhelming task. The greater Burlington metropolitan area serves as a destination retail area for a large area of Vermont and beyond.

Figure 3-1. Retail Taxable Sales in Chittenden County

	2004	2005	2006	2007
Williston	398,197,224	422,826,577	436,736,777	432,768,396
S. Burlington	297,223,644	305,131,523	323,400,486	317,919,156
Colchester	218,429,681	229,880,551	238,288,656	255,562,180
Burlington	269,989,635	266,632,672	253,360,026	238,705,385
Essex	88,633,950	94,942,034	95,940,696	96,486,796
Shelburne	60,874,531	60,967,701	62,795,710	62,919,769
Milton	35,032,495	37,849,492	37,954,408	39,850,435
Richmond	20,997,132	22,217,919	23,959,920	22,219,677
Winooski	15,755,389	16,842,684	17,580,799	16,891,208
Hinesburg	9,689,981	10,463,565	11,234,358	12,503,203
Bolton	*withheld*	5,091,582	*withheld*	*withheld*
Jericho	3,554,967	4,306,402	5,359,015	5,382,590
Underhill	3,298,291	3,607,749	4,217,374	3,981,399
Charlotte	3,152,832	2,978,276	2,943,409	3,502,648
Huntington	483,258	522,177	530,910	700,107
Westford	404,383	481,050	473,740	507,504
All	**1,431,419,708**	**1,486,916,689**	**1,521,259,168**	**1,516,596,799**

Source: Vermont Department of Taxes

Figure 3-2. Nearby Designated Downtowns, Village Centers and Growth Centers



If one drove east from the proposed growth center along Route 2, one would encounter retail commercial land uses at the Exit 16 commercial area with Costco and other big box retailers, continuing through downtown Winooski, and throughout downtown Burlington. One would then pass the University of Vermont, and drive past the junction of South Burlington's Dorset Street and University Mall area, through South Burlington's Williston Road commercial area, past the Burlington International Airport, and eventually arrive at the state's largest retail activity center, Williston's Taft Corners. This distance is approximately 12 miles and the retail commercial land uses are almost continuous. Retail is rarely replaced by undeveloped lands, institutional uses, or mixed-use areas that are predominately residential.

Similar journeys through retail land uses can be made from the proposed growth center via Route 2A to Taft Corners and along Route 7 to Shelburne. These highways may have more non-commercial land uses, as measured by acres but still have large quantities of retail businesses.

In relative terms to the region, the anticipated retail development in the proposed growth center will be a proverbial "drop in the bucket" for Chittenden County. There will be no retail buildings greater than 10,000 square feet constructed within the proposed growth center. Total retail square footage in the proposed growth center is estimated to be approximately 25 percent of the total 478,550 square feet of planned commercial space. This amounts to less than 120,000 square feet of new retail space.

Given that the proposed growth center will be surrounded by retail giants, the retail that will occur there will primarily serve the residents of Colchester. It is clearly not reasonable to assume that the growth center would have a negative effect on existing retail in the region.

Analysis of Retail Activity in Chittenden County

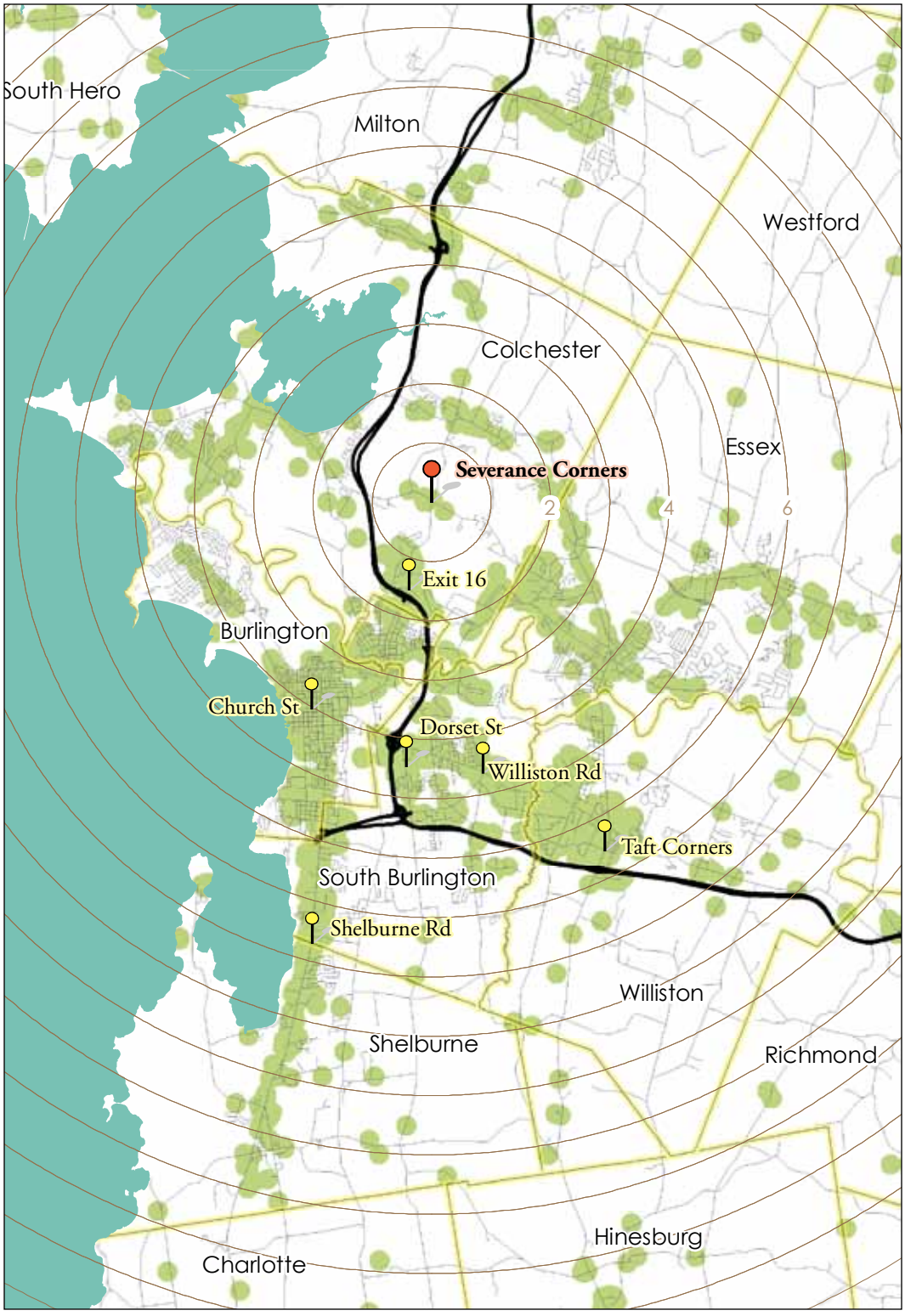
Colchester plays a major role in retail activity in Chittenden County. The Town's retailers recorded over $255 million of taxable retail revenue in 2007. This represents the third largest sales volume of a municipality in Chittenden County behind South Burlington ($317 million) and Williston ($432 million). Burlington was slightly behind Colchester with a recorded sales volume of $238 million. Colchester and Burlington reversed ranking positions from 2006 when Burlington had the third highest volume of sales and Colchester was fourth.

These top four retailing municipalities are also of statewide significance. Only the City of Rutland with $323 million in retail taxable sales for 2007 joins the ranks of these major retail centers. In fact, no other municipality in the State of Vermont reported more than $140 million in retail sales in 2007. In other words, the sixth ranking municipality produces approximately $100 million less than the fifth ranking municipality. These top five retail centers in the state have held these rankings for at least the past eight years.

Retail activity from Chittenden County accounts for 29 percent of Vermont's total taxable retail revenue. Colchester and the other top three municipalities account for 82 percent of the county's revenue to the state. Colchester alone accounts for 17 percent of the county total.

In terms of retail growth, Colchester has experienced the most significant change in Chittenden County in recent years. This analysis reviewed retail sales growth each year in each municipality from 2000 to 2007. The annual average percent change in taxable retail sales in Colchester

Figure 3-3. Commercial Land Uses in the Greater Burlington Metropolitan Area and Distance in Miles from Colchester's Growth Center



was 7.4 percent during that period. Only Milton at 7.8 percent had a higher average annual percentage increase. However, Milton's total sales volume was $39 million in 2007, while Colchester's was $255 million. Among the top four retail municipalities in the county, Colchester is clearly the fastest growing. Williston experienced the second fastest growth rate of retail activity with an annual average rate of change at nearly five percent. Colchester's retail activity grew about two and a half times faster. South Burlington's rate of growth was just under three percent. Burlington's growth was essentially unchanged. Retail activity in Burlington grew slightly between 2002 and 2006 but has since dropped back to the 2000 level resulting in a 0.1 percent annual average rate of change during this seven-year period.

Figure 3-4. Retail Relative to Adjacent Municipalities and the Rest of Colchester

	Total Retail Square Footage	Ratio to Proposed Growth Center
Burlington	3,577,282	32:1
S. Burlington	2,874,860	24:1
Williston	2,079,912	20:1
Essex	1,549,888	12:1
Colchester	902,436	9:1
Milton	707,468	5:1
Winooski	258,725	3:1
Growth Center	**119,637**	**1:1**

To put the amount of retail development anticipated to occur within the proposed growth center in a regional context, proprietary data was acquired to determine total commercial square footage in each Chittenden County municipality. The results are shown in Figure 3-4.

The amount of retail square footage in Burlington is 32 times greater than anticipated in the proposed growth center. South Burlington has 24 times more retail space than anticipated in the proposed growth center. If built today, the retail square footage in the proposed growth center would be 11 percent of Colchester's total retail space.

Description of Nearby Retail Areas

Exit 16 is the closest commercial area to the proposed growth center at 1.6 miles away. It is a densely developed commercial and industrial area bounded on the south by the City of Winooski, on the east by the sand plains and Forth Ethan Allen, on the north by Severance Corners, and on the west by Interstate 89. It is distinctly separated from Severance Corners by a prominent natural barrier - the Sunny Hollow ravine. Municipal water and municipal sewer serve the entire area. This area generates the largest amount of commercial activity in Colchester. It is the current hub of business in Colchester with several hotels, a national retailer, a grocery store, heavy industrial uses, a quarry operation, numerous small businesses, Class A office space, and the University of Vermont's medical research facility. The Town intends for this area to remain the focus for large-scale commercial activity and heavier industrial uses.

The retail area on West Lakeshore Drive is located approximately 1.9 miles west down Blakely Road from the proposed growth center. There is minimal retail activity in this area mostly consisting of convenience retail and neighborhood scale shops generally no greater that 5,000

square feet in size. This area includes a town beach and park, several marinas, and in many ways serves as the center of recreational use. Commercial activity here generally serves residents and tourists. The Town plans for this area to transition from a "highway commercial" corridor to a village center with small-scale community-serving and recreation/tourist-oriented activities. Colchester's plans for West Lakeshore Drive and Severance Corners are complementary. The recreation amenities on Malletts Bay will be easily accessible to growth center residents and the retail activity at Severance Corners will add to what is available on West Lakeshore Drive drawing additional visitors or extending visitor stays. Pedestrian and bicycle linkages will exist between these two areas.

The center of Colchester Village, at the fire station, is 2.1 miles from the proposed growth center. The area is currently characterized by a mix of zoning ranging from industrial to high-density residential. The entire area is served by municipal water and on-site septic (with the exception of Creek Farm Plaza and Brault's Mobile Home Park which have municipal sewer). This area has much of the character expected of New England villages, including old homes close to the road, small stores, churches, small businesses and public buildings all in a compact setting close in proximity to a rural area. The greater village area includes some commercial properties, but mostly consists of residential neighborhoods. With the exception of the existing commercial /industrial properties along the railroad right-of-way, the Town plans for commercial growth outside the village core to be limited.

3.3 Describe the extent to which any downtowns, village centers or new town centers (designated or non-designated) that are located outside the proposed growth center currently serve as significant employment, retail, service or civic centers for residents in the applicant municipality.

There are significant connections between the municipalities within the greater Burlington metropolitan area - Burlington, Winooski, Colchester, Essex, Williston and South Burlington. Many residents travel from one community to another to work, shop and recreate. According to the 2000 Census, approximately one-quarter of Colchester's employed residents work in Town, as shown in Figure 3-5. Another 60 percent work in Burlington, Essex or South Burlington. Very few commute to jobs outside Chittenden County.

Figure 3-5. Place of Work for Colchester Residents

	#	%
Burlington	2,639	28%
Colchester	2,170	23%
Essex	1,622	17%
S. Burlington	1,470	15%
Other Chittenden Cty.	1,339	14%
Outside Chittenden Cty.	329	3%

Source: 2000 Census

3.4 Describe the extent to which the applicant municipality currently serves as an employment and/or residential center in the region, presenting the best available statistics regarding place of work and residence for people living and working in the applicant municipality.

While more people likely still commute out from, rather than in to, Colchester, the Town has become a regional employment center. As commercial and industrial development has expanded, the Town's role as a bedroom community, largely for the City of Burlington, has shifted. Approximately 10 percent of Milton's and Winooski's employed residents commuted in to jobs in Colchester in 2000. Colchester could be viewed as an employment center for residents in Williston, Grand Isle, Jericho, Essex, North and South Hero, South Burlington, Georgia, Fairfax and even Burlington - all of which sent five percent or more of their employed residents to work in Colchester according to the 2000 Census.

3.5 Summarize the Regional Planning Commission's 20-year projections for population, housing, employment growth for the region and discuss what percentage of regional growth the municipality is planning to accommodate within its growth center by type – residential, commercial (retail and non-retail), and industrial, and how that compares to its current regional share, explaining any significant changes in regional share being planned for by the municipality.

Population

In recent years, four sets of predictions for Chittenden County's future population have been prepared:

- In 2000 and 2001 Economic and Policy Resources, Inc. (a Williston-based consulting firm) prepared population and employment forecasts for Chittenden County. The EPR forecasts were officially adopted by CCRPC in 2001 and have been used to prepare the 2025 Metropolitan Transportation Plan, the Long-Term Strategic Economic Development Plan, and (with some revision) the "2010 Housing Targets" that were endorsed by CCRPC. The forecasts for the county and its subareas for every five years from 2000 to 2035 using a two-stage process:
    1. A regional input-output model (REMI Policy Insight) was used to forecast the future economy of the six-county Northwest Vermont region (including employment and population)
    2. Two forms of regression were used to identify the most statistically reliable trend lines for the shares of the region's employment and population in Chittenden County (i.e., Small Area Population Projection) and in subareas of Chittenden County (i.e., Ordinary Least Squares regression). These trend lines were then used to make projections of the County and subarea shares of the forecasted regional total over the same period.
- Woods & Poole, a consulting firm based in Washington, D.C., annually prepares updated race-, age-, and gender-specific population forecasts and economic forecasts

(including employment) for all U.S. counties for every five-year period to 2030. Woods & Poole report that the overall error of their 27,819 county-level 10-year forecasts made since 1984 averages 14.3 percent for employment and 9.7 percent for population. Their process:

1. Uses a model of the U.S. economy to prepare economic forecasts for each of 172 Economic Areas (EAs) defined by the U.S. Department of Commerce's Bureau of Economic Analysis. The EA used for Chittenden County includes nine counties in northern Vermont and three counties in northeast New York.
2. Predicts population and population characteristics for the EA and counties using a cohort component method that forecasts migration rates based on forecasted employment.

- Vermont Agency of Transportation retained the Louis Berger Group to prepare an Environmental Impact Statement (EIS) for the proposed segments A and B of the Circumferential Highway. To assess the likely impacts of the alternatives being considered, Louis Berger prepared a set of population and employment forecasts in 2006 for the county and its sub-areas. Berger employed a cohort-component model with refinements using U.S. Census Bureau estimates for recent population and net migration rates for certain age cohorts based on a Berger employment forecast.
- Vermont's Department of Aging and Independent Living retained the Massachusetts Institute for Social and Economic Research (MISER), affiliated with the University of Massachusetts, to prepare population forecasts for Vermont's counties and municipalities from 2005 to 2020. Prepared in 2003, the MISER forecasts use a cohort component method, statewide average death and migration rates, and local fertility rates (statewide fertility rates were used for about one-third of the communities that tended to have small numbers of people).

The forecasted population used in the 2006 Chittenden County Regional Plan is the average of the Woods & Poole, Berger, and MISER forecasts made for that forecast year rounded to the nearest 100 in 2005 and 2010, the nearest 1,000 in 2015 and 2020, and the nearest 10,000 in 2025 and 2030 (see Figure 3-6).

Figure 3-6. 20-Year Population Forecast for Chittenden County from the Regional Plan

Historical Data			**Historical Growth Trends** *Ave. Annual Rate of Change*		**Current Year**	**Projected Data**	**Projected Growth Trend** *Ave. Annual Rate of Change*
1980	*1990*	*2000*	*80-00*	*90-00*	*2005*	*2030*	*05-30*
115,534	131,781	146,571	1.32%	1.07%	151,500	190,000	0.91%

Derived from CCRPC's population, household and employment projections

The forecasted rates of population change are consistent with historical rates of population change. Although the rate of change between 2005 and 2030 is less than the rate of change seen from 1980 to 1990 and from 1990 to 2000, the forecasted rate of change still represents

an expansion in overall population growth for the county. Population growth in Colchester will expand slower than the county during the forecast period. This represents a relative slowing period for the Town compared to the county. The Town will also decrease in terms of county share of population that will reside in Colchester. The Town will have approximately 10.6 percent of the county's population in 2030. This is a decrease of a little more than one percent of the population.

Households

To estimate the number of projected households (see Figure 3-7) the forecasted population needs to be converted to forecasted households. This conversion is made by

- Deducting from each forecast of total population the forecasted number of people living in group quarters (such as dormitories, nursing homes, and army barracks) to obtain forecasts of the number of people living in households and
- Dividing each forecast of the number of people living in households by the forecasted number of people per household to obtain forecasts of the number of households rounded to the nearest 10 in 2005 & 2010, the nearest 100 in 2015 & 2020, and nearest 1,000 in 2025 & 2030 (see Figure 3-7).

Chittenden County's 20-year household forecast is consistent with historic growth trends. The number of households will continue to increase at approximately the same average annual rate of change. The Town's share of the county's total households will decrease from 11.4 percent today to 9.7 percent in 2030.

Figure 3-7. 20-Year Household Forecast for Chittenden County from the Regional Plan

Historical Data			**Historical Growth Trends** *Ave. Annual Rate of Change*		**Current Year**	**Projected Data**	**Projected Growth Trend** *Ave. Annual Rate of Change*
1980	*1990*	*2000*	*80-00*	*90-00*	*2005*	*2030*	*05-30*
38,528	48,439	56,452	1.93%	1.54%	59,580	83,000	1.31%

Derived from CCRPC's population, household and employment projections

Employment

In 2005, the Vermont Agency of Transportation (VTrans) retained Louis Berger to prepare the CIRC-Williston Environmental Impact Statement. In 2006, Louis Berger prepared a series of 5-year forecasts of the county's total employment from 2005-2030 based on a regression model that estimated employment for the Northwest Vermont region based on national gross domestic product and productivity and then forecasted Chittenden County's share of the regional total based on the historic trend in this share (see Figure 3-8).

The Chittenden County Regional Planning Commission has endorsed Louis Berger's employment forecast. This regional employment forecast is consistent with historic regional growth trends, as Chittenden County will continue to see an increase in employment over the

next 20 years. The Town's share of regional employment is estimated to remain the same from what it is today.

Figure 3-8. 20-Year Employment Forecast for Chittenden County

Historical Data			Historical Growth Trends *Ave. Annual Rate of Change*		Current Year	Projected Data	Projected Growth Trend *Ave. Annual Rate of Change*
1980	*1990*	*2000*	*80-00*	*90-00*	*2005*	*2030*	*05-30*
53,851	77,546	95,133	2.89%	2.07%	129,791	172,718	1.15%

Derived from CCRPC's population, household and employment projections

4.1. Discuss the character, land uses and density of development that currently exists and will be permitted on lands within the designated downtown, village center or new town center associated with the proposed growth center, specifically citing the steps the municipality is taking to encourage infill development, adaptive reuse and/or redevelopment of vacant or under-utilized land within the designated downtown or village center, or to promote development with a 'downtown' character within a new town center.

Colchester's designated new town center at Severance Corners is approximately 10 acres in area. A planned unit development in the form of a new "downtown" is currently under construction on the site. When all phases of the development are complete, the new town center is expected to provide 152 dwelling units and 86,600 square feet of commercial space. The planned development includes 13 buildings with a total floor area of 302,372 square feet. Phase 1 of the development, which is located on the 10-acre designated new town center, includes five of those buildings containing 50 dwelling units and 46,670 square feet of commercial space. See response to Question 4-2 for more details about the steps Colchester is taking to promote development with a 'downtown' character within the new town center and the growth center as a whole.

Figure 4-1. Views of the New Town Center

Figure 4-2. New Town Center (Severance Corners PUD) Illustrative Site Plan

4.2. Discuss the character, land uses and density of development that currently exists and will be permitted on lands within the proposed growth center but outside the designated downtown, village center or new town center associated with the proposed growth center, specifically citing the steps that the municipality is taking to encourage a the settlement pattern resulting from growth center designation that is not be characterized by scattered or excessively land consumptive development.

Two planned developments have been approved by the Town for properties within the growth center outside the new town center, but construction has not yet commenced. The Owls Glen PUD includes 113 residential units - 49 single-family homes, four duplexes, and seven multi-family buildings containing a total of 56 units. The Sunderland Corners PUD includes 206 dwelling units, 12,400 square feet of retail space, 34,040 square feet of office/commercial space, 4,050 square feet of restaurant space and 4,050 square feet of day-care space.

Figure 4-3. Aerial Views of the Growth Center (looking north and east)

Figure 4-4. Owls Glen Site Plan

Figure 4-5. Sunderland Corners Site Plan

Figure 4-6. Planned and Conceptual Development Patterns within the Growth Center

The developers of the Severance Corners PUD have a conceptual site plan for continuing their project across Blakely Road to the remaining large, developable parcel within the growth center (the northwest corner). That project has not yet reached the engineering and permitting phase. Additionally, there is the potential for a limited amount of infill development on the remaining undeveloped acreage associated with the Severance Corners PUD.

Land within the growth center has been zoned General Development 3 (GD-3). Colchester's GD-3 district has as its stated purpose:

> To provide compact mixed use development within the Severance Corners neighborhood. Businesses and residential uses should be developed to complement each other. Pedestrian accessibility, aesthetics and public spaces are to be emphasized; Development should be permitted and encouraged as long as it is complimented, within each development unit, by public amenities, open space, and aesthetic site and building design. (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 3A, Page 3)

The dimensional standards of the district encourage high-density settlement patterns by establishing a base density of 1 dwelling unit per 10,000 square feet and offering the potential to raise that density to a maximum of 12 units per acre through bonuses and potentially the transfer of development rights. Total lot coverage in the GD-3 district can be up to 70 percent and buildings can be up to 40 feet in height (or 45 feet with a waiver). The standards of the GD-3 district, summarized below, also provide guidance for site and building design (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03F, Pages 4-6):

> 1. Siting, building configuration, height, scale and design. Siting of new buildings and supporting site amenities should respect the concepts expressed below. The objective is to create and maintain a compact streetscape with buildings fronting on the sidewalks along Severance and Blakely Roads, Routes 2 & 7, and new interior roadways. Whenever possible, all parking lots shall be located behind buildings and adequately screened from Severance and Blakely Roads and Routes 2 & 7. Building setbacks for interior roads may be reduced by the Development Review Board as part of an overall PUD approval.
>
> (a) Building configurations. Buildings should be designed to reduce the visual mass of the structure while creating multiple entrances to spaces that face onto pedestrian walkways.
>
> (b) Building heights & scale. Buildings should vary yet respect the height and scale of sequence set by neighboring buildings. One, two, three and four story buildings (up to a maximum of 40 feet in height) are acceptable. The height of a building may be increased if the project is developed as a Planned Unit Development (PUD).
>
> 2. Pedestrian walkways, circulation, and parking:
>
> (a) Pedestrian accessibility. Continuous internal pedestrian walkways, no less than 5 feet in width, shall be provided from the public sidewalk or right-of-way to the principal customer entrance of all buildings on the site. At a minimum, walkways shall connect focal points of pedestrian

activity such as, but not limited to, transit stops, street crossings, building and store entry points, and shall feature adjoining landscaped areas that include trees, shrubs, benches, flower beds, ground covers, or other such materials for no less than 50 percent of its length. Sidewalks, no less than 5 feet in width, shall be provided along the full length of the building along any façade featuring a customer entrance, and along any façade abutting public parking areas.

(c) Central features & community spaces. Buildings should offer attractive and inviting pedestrian scale features, spaces, and amenities. Entrances and parking lots should be configured to be functional and inviting with walkways conveniently tied to logical destinations. Pedestrian ways should be anchored by special design features such as towers, arcades, public atrium plazas, completely enclosed walkway connection between buildings, porticos, pedestrian lighting features, bollards, planter walls, and other architectural elements that define circulation ways and outdoor spaces. Each establishment subject to these standards shall contribute to the establishment or enhancement of community and public spaces by providing at least two of the following: patio/seating area, pedestrian plaza with benches, transportation center, window shopping walkway, outdoor play area, kiosk area, water feature, clock tower, or other such deliberately shaped area and/or a focal feature or amenity that in the opinion of the Development Review Board adequately enhances such community and public spaces.

(e) Parking design. Parking areas shall be designed to reduce the visual dominance of automobiles and shall be aesthetically compatible and sensitive to the built and natural landscape. Center block parking with multiple entrances from the street shall be employed wherever feasible.

Colchester's growth center is unlike most in the state in that it will be entirely new construction – it is not an extension of an existing downtown or village center. It will take a number of years before the amount of development within the growth center reaches a critical mass and the planned character of the area – a compact, walkable, mixed-use center – emerges. Streets, blocks, sidewalks and paths are being built one project at a time, but ultimately the open spaces between the three currently planned developments will be filled in as illustrated in Figure 4-6.

It must be recognized, however, that the growth center faces some challenges outside the control of the Town or developers. Existing and planned highways divide the growth center; the state controls access to and across these rights-of-way. As shown in Figures 4-6 and 9-1, the Town is planning to provide bike and pedestrian connections across those rights-of-way to interconnect the quadrants. Further, as demonstrated by the transportation planning that has already been completed (see Section 9), Colchester intends to continue its partnership with growth center developers in order to jointly plan, build and maintain the growth center's transportation infrastructure, including working with the state to improve connections to and across its existing and planned roadways.

4.3. Discuss the character, land uses and density of development that currently exists and will be permitted on lands outside the proposed growth center, specifically citing the steps the municipality is taking to further the goal of retaining rural character outside the proposed growth center, to the extent that such a character exists.

The character, type and density of land uses in the Town of Colchester, outside the growth center, are more diverse than those in a typical Vermont town including: seasonal residential, residential, agricultural, recreational, commercial, industrial, institutional, and natural areas. Figure 4-7 shows how the Town has been divided into a series of neighborhoods for planning purposes.

Colchester's neighborhoods are described in the land use section of the Town Plan (Attachment A-1, pages 7-33) as follows:

> **Exit 17.** Within this neighborhood is the Exit 17 future growth center as well as low-density residential and village mixed uses north of Route 2. Originally adopted as a growth center in 2000 (see Exit 17 Growth Center Plan), this area is best characterized as a long-term economic future growth center to be fully utilized after the Severance Corners growth center is completed. It is largely undeveloped with some light industrial and residential uses scattered mostly within the area east of Interstate 89. Development within this area is inhibited by poor on-site soils, a lack of water and sewage infrastructure, and limited access opportunities. Until the Town can focus on improving the infrastructure available for this area it is unlikely that significant construction will occur here. (Pages 11-12)
>
> **Exit 16** is the current center of business within Colchester with several hotels, a national retailer, a grocery store, heavy industrial, a quarry operation, numerous small businesses, Class A office space, and the University of Vermont's medical research facility. (Pages 12-13)
>
> **Fort Ethan Allen.** Three major institutions occupy this neighborhood and have a significant impact on land use patterns within the area as well as the greater community's economy: Saint Michael's College, Fanny Allen Hospital, and Camp Johnson. The Fort Ethan Allen is the historic military outpost of the area that has transitioned into Camp Johnson. The historic Fort is mostly in Colchester but partially in the Town of Essex. Adaptive reuse, rehabilitation, and repair of these historic National Register structures has occurred over the past thirty years that has allowed these structures to be used for multifamily housing, small businesses, and cultural organizations. A variety of communication facilities occupy the historic Fort making for a small yet intense high-tech sector within the Fort. (Pages 14-16)
>
> **Colchester Village.** This area has much of the character expected of New England villages but not found elsewhere in Colchester, including old homes close to the road, small stores, churches, small businesses and public buildings all in a compact setting close in proximity to a rural area. Within the Village core are a variety of commercial buildings and businesses that are of a local scale that blends in with the historic fabric. (Pages 16-18)

West Lakeshore Drive. The area of Lakeshore Drive from the corner of Blakely Road to the corner of Prim Road is recognized as an important asset for the Town. With the Town beach and many boating opportunities, this is the center of recreational use on Malletts Bay, a variety of commercial and service uses. This area should be a focal point for tourism and recreation. Commercial uses in this area serve recreational activities, local residents and regional commuters. The neighborhood should be improved to better provide services and recreational access for residents and tourists. The Hazelett Company should remain as an employment center in this area and expand as needed. Small businesses are important to maintaining the economic vibrancy of the Bay. (Pages 18-19)

The Town Services Area. This neighborhood contains the majority of the Town's school facilities as well as the Town Office Building, Public Works Facility, and Rescue Building. A number of small businesses, predominantly professional office space, line Blakely Road within this neighborhood. Surrounding neighborhoods are medium to high-density in nature. (Pages 19-21)

Prim Road/Warner's Corner/Heineberg Drive. Warner's Corner is a gateway to the Town from the City of Burlington. It is currently developed with a high density of commercial and professional office uses around Warner's Corner surrounded by medium density residential neighborhoods. The majority of the properties along Prim Road are zoned for commercial and general development with a medium density residential neighborhood along the east side of Prim in the vicinity of Bean Road. (Pages 21-22)

Shipman Hill. This area consists primarily of the agricultural lands located along Malletts Bay Avenue and Lavigne Road at the top of Shipman Hill and also includes the floodplains along the bottom of the hill. This area's unique characteristic is the farming community located within its boundaries. Climate, soils, location and property ownership have made this area a center of farming operations which produce vegetables, fruits, eggs, dairy products, flowers and landscape plantings. Several of the farmers are able to capitalize on their location by running farm stand operations. (Pages 23-24)

Bean/Macrae neighborhood includes the medium and low-density residential neighborhoods along Prim Road and the large floodplains to the south and east. The flood plains and the Winooski Valley Park District Macrae Meadows Park provide for continuity between the habitats of this neighborhood with the larger intervale and Malletts Bay Avenue floodplains. (Pages 24-25)

Porter's Point. The majority of this suburban residential neighborhood is built-out containing a significant number of homes that were constructed in the mid to late twentieth century with a significant number of seasonal camps that have been converted to year-round use. Medium to high density residential zoning is typical within this neighborhood although low density residential and flood plain zoning are present in the more environmentally sensitive portions of this area. (Pages 25-26)

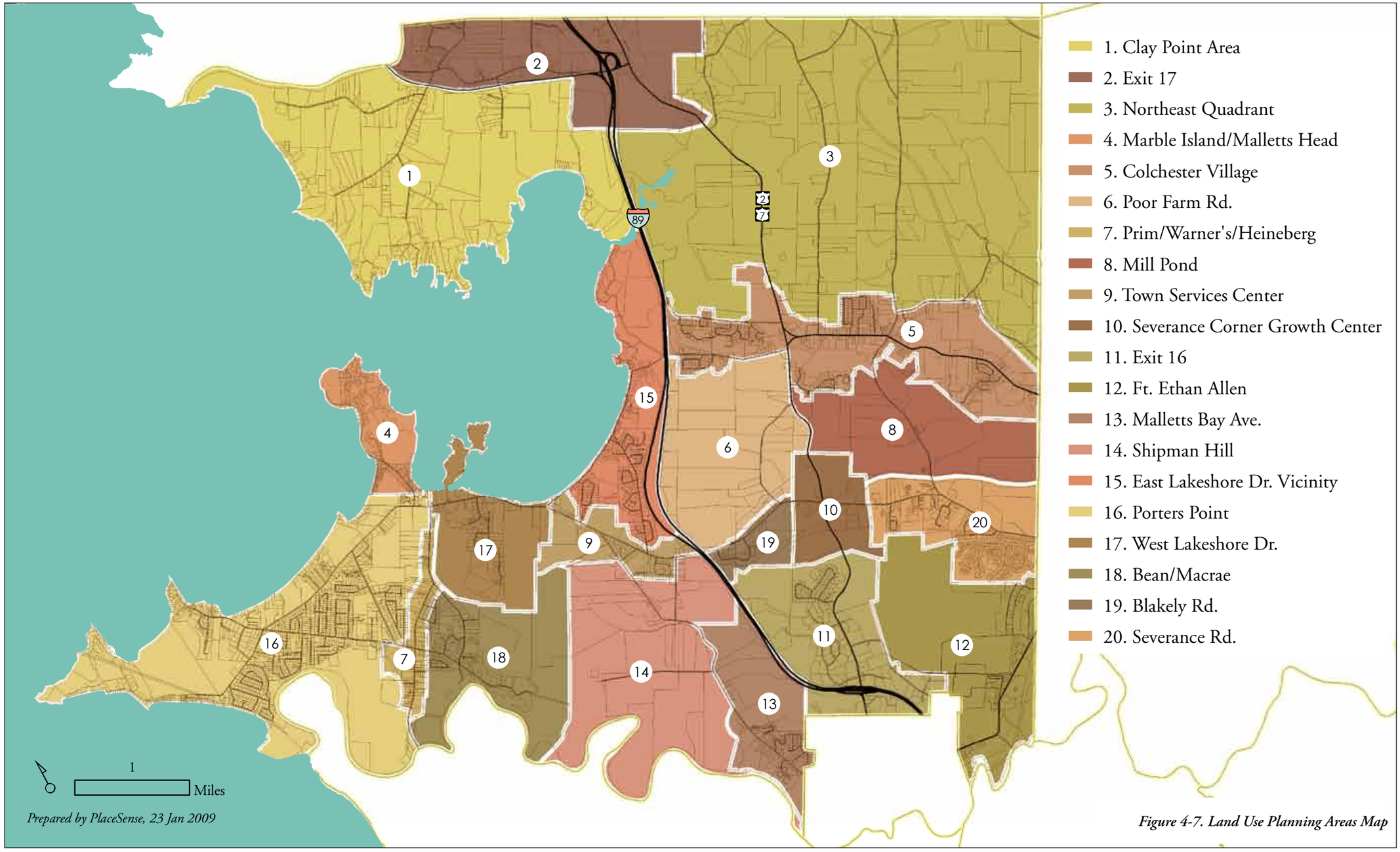


Figure 4-7. Land Use Planning Areas Map

Blakely Road. The properties included in this area are low or medium density residential properties that front directly on Blakely Road or are located in the Edgewood neighborhood which loops off of Blakely Road. This neighborhood is mostly built-out. (Page 26)

The **Severance Road** neighborhood is predominately suburban residential in character with a range of low to high density neighborhoods including a mobile home park, although pockets of agricultural use exist. (Pages 26-27)

East Lakeshore Drive. The area is currently developed with a high density of camps and year-round residences. The area east of East Lakeshore Drive and surrounding Williams Road functions as a suburban residential neighborhood as does much of the area along Bay Road. North of Bay Road is the seasonal campground Lone Pine that still brings in many summer residents to the community. The areas west and north of Lone Pine decrease significantly in density and become a scattered collection of summer seasonal and year round homes. (Page 27-28)

Marble Island/Malletts Head. Malletts Head has low density, year round and seasonal residential uses as well as commercial recreational uses at the Marble Island Marina and Brown Ledge Camp. There are also significant natural areas, including three undeveloped hills which are prominent natural landscapes, particularly as seen from the water. Low-density residential uses along the shoreline assist in preserving lake views, water quality, and help to reduce the overall impact of development within this sensitive area. (Page 28-29)

Malletts Bay Avenue. This area includes a preexisting industrial park, a quarry, active farms and residential areas. Zoning varies accordingly from industrial to agricultural to low-density residential to high-density residential. The highest residential density is along the Winooski Town Line. (Pages 29-30)

The **Clay Point Area** is geographically rugged, with striking lakeshore ledges, thick forests and numerous rock outcrops, beaver ponds and other wet areas. While this area is attractive due to its natural beauty, development is inhibited by marginal soils, a lack of potable water, poor access, and deficient road infrastructure characterized by many long, narrow, dead-end private roads. This area is also removed from municipal and emergency services. A significant portion of this neighborhood has been set aside as Niquette Bay State Park. This area is zoned for low density residential use. (Pages 30-31)

Poor Farm Road. Parcels range in size from a little more than two acres to over 100 acres, with the majority of parcels being zoned agricultural. Low density residential zoning also exists in this area primarily in the immediate vicinity of Blakely Road. This area includes one of the few sizable deeryards in Colchester as well as Quartzite Highlands. This area is valued as an outstanding rural setting by those that own and live there. The Poor Farm Road area should remain rural in character. The further development of

agricultural operations within this area should be encouraged. (Pages 31-32)

Mill Pond. The area provides east-west connectivity for natural areas along Indian Brook and is characterized by rolling terrain and marginal soils. Residences are scattered among small agricultural operations along Mill Pond Road and Roosevelt Highway. This area is currently zoned agricultural with some low-density residential zoning immediately along Mill Pond Road. The current mix of agricultural and low-density residential zoning should continue to be preserved within this area. (Page 32)

Northeast Quadrant. This area is the most rural area of Colchester and is characterized by small farms, large residential lots, limited soils for on-site septic systems, and difficult terrain to develop. The northwestern edge of this area has naturally occurring radioactive properties within the bedrock underlying the area causing issues for potable water and radon. This area is home to Colchester Pond which is owned and managed by the Winooski Valley Park District. (Page 32-33)

The Town's zoning districts guide development in a manner compatible with the land use policies of the Town Plan. Twenty percent of the Town's land area is zoned agricultural with a maximum density of one unit per 25 acres, while another 12 percent is within identified floodplains. The Town's commercial, industrial and high-density mixed-use districts comprise 20 percent of the Town's land area. The remainder of the Town is zoned for residential land uses at densities ranging from one unit per 10 acres to three units per acre.

Figure 4-8 shows the town's zoning districts and the purpose of those districts is summarized below (Attachment C-1: Colchester Zoning Regulations):

A Residential Three District is hereby formed in order to encourage high density residential uses. This district is primarily located in developed areas with existing suburban residential. (Article 3, Section 3.01, Page 1) (Density: 1 dwelling per 10,000 sq ft w/ municipal water and sewer/community septic or 1 dwelling per 15,000 sq ft w/ onsite septic)

A Residential Two District is hereby formed in order to encourage medium density residential uses. This district is primarily located in developed areas with existing suburban residential. (Article 3, Section 3.02, Page 1) (Density: 1 dwelling per 15,000 sq ft w/ municipal water and sewer/community septic or 1 dwelling per 20,000 sq ft w/ onsite septic)

A Residential One District is hereby formed in order to encourage low density single-family residential uses. This district is located in areas that are transitioning from rural residential to suburban residential. (Article 3, Section 3.03, Page 2) (Density: 1 dwelling per 30,000 sq ft w/ municipal water and sewer/community septic or 1 dwelling per 40,000 sq ft w/ onsite septic)

A Residential Five District is hereby formed in order to encourage preservation of rural and agricultural character and uses while allowing for low density single-family residential uses. This district is located in rural and agricultural areas that are transitioning to rural residential. (Article 3, Section 3.04, Page 3) (Density: 1 dwelling per 5 acres)

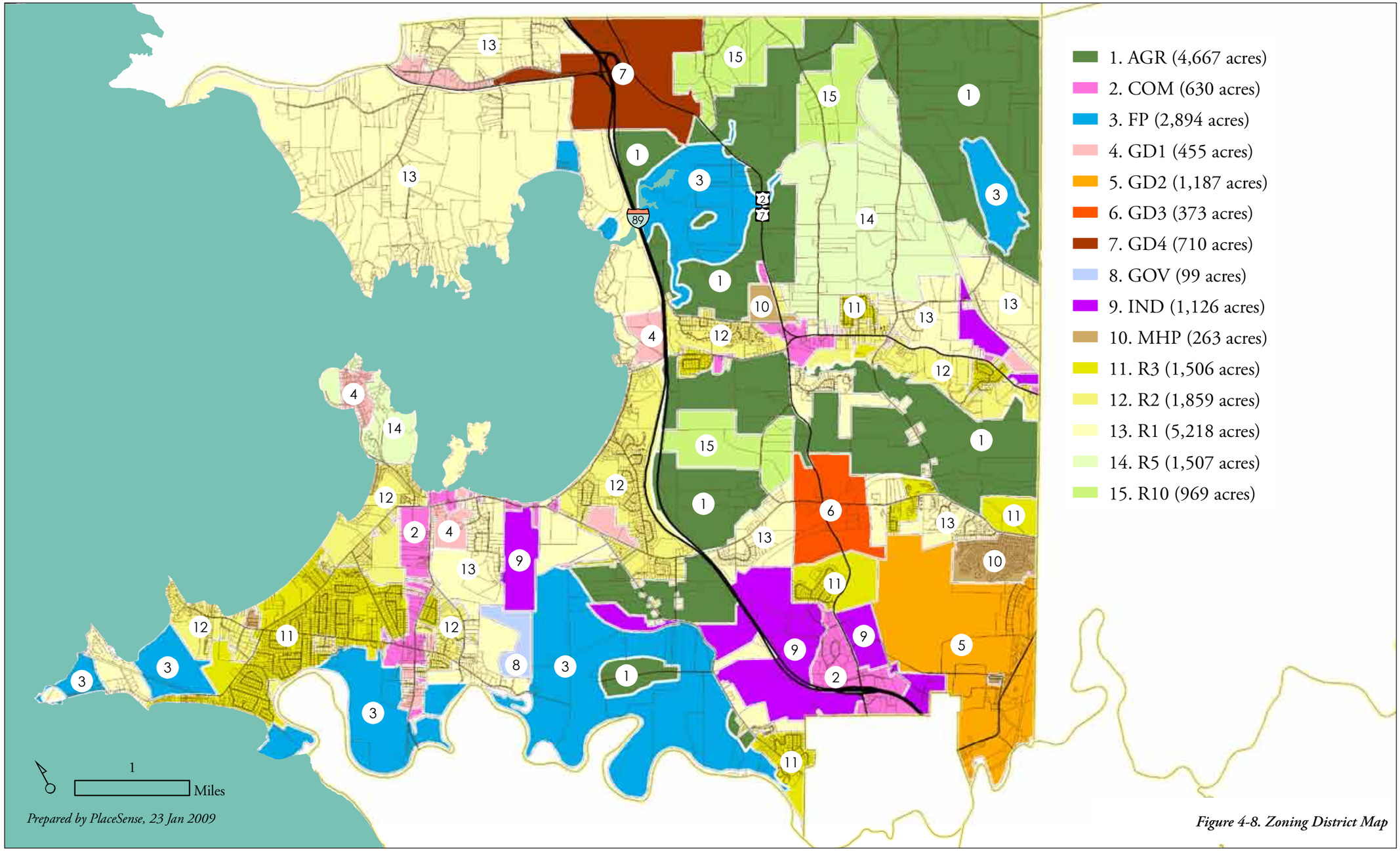


Figure 4-8. Zoning District Map

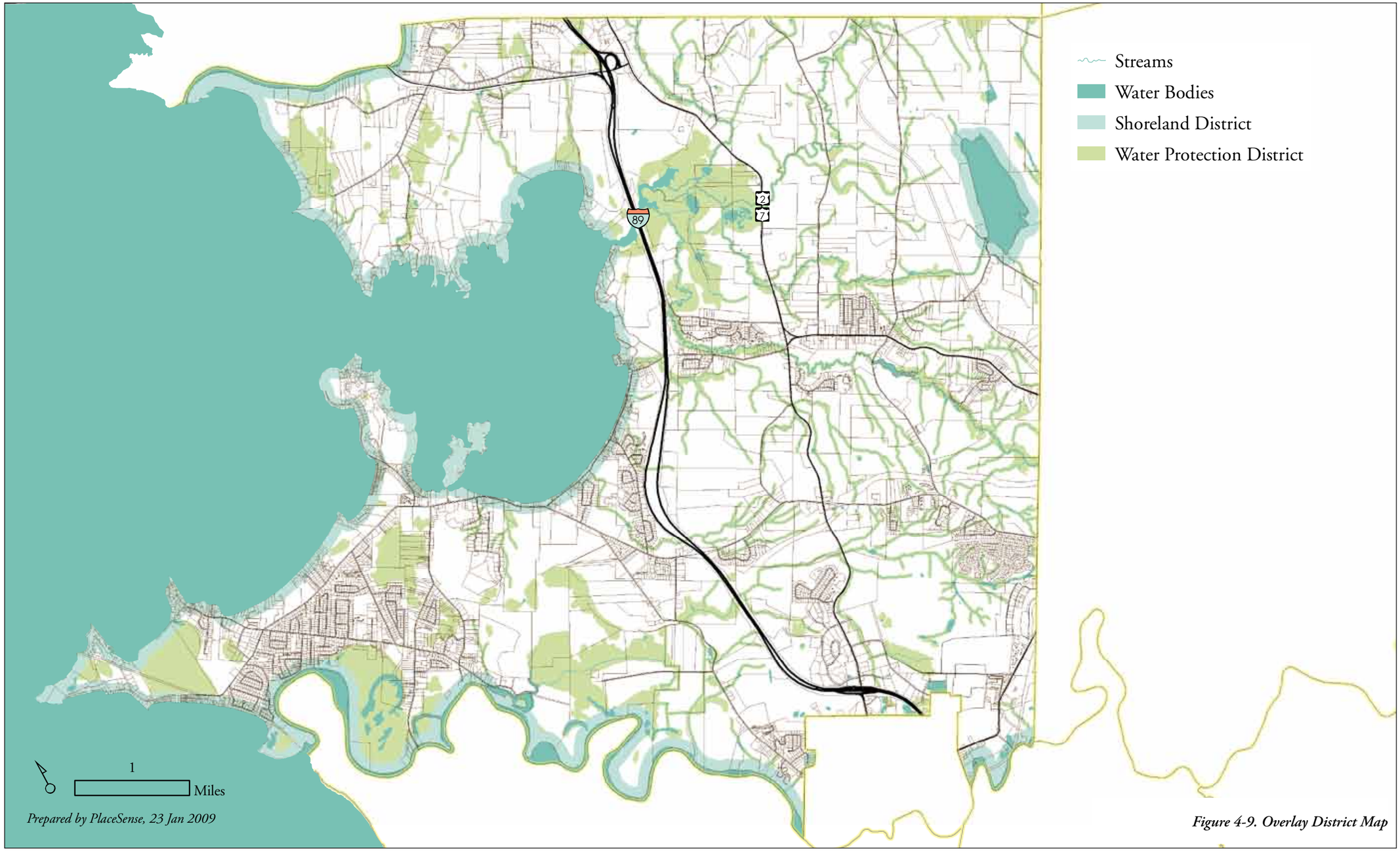


Figure 4-9. Overlay District Map

A Residential Ten District is hereby formed in order to encourage preservation of rural and agricultural character and uses while allowing for low density single-family residential uses. This district is located in rural and agricultural areas. (Article 3, Section 3.05, Page 3) (Density: 1 dwelling per 10 acres)

General Development One (GD-1). To provide for residential and compatible commercial featuring convenience of required facilities and essential services in the Colchester Village and Warner's Corners neighborhoods. (Article 4, Section 4.01, Page 1) (Density: 1 dwelling per 10,000 sq ft w/ municipal water and sewer/community septic or 1 dwelling per 20,000 sq ft w/ onsite septic)

General Development Two (GD-2). To provide a range of commercial, light industry and compatible multi-family dwellings and related uses for the Forth Ethan Allen neighborhood and vicinity. (Article 4, Section 4.02, Page 2) (Density: 1 dwelling per 10,000 sq ft)

General Development Four (GD-4). To encourage a mix of uses (both residential and nonresidential) in an area proximate to Interstate Exit 17 that has relatively easy access to Interstate 89. Industrial and warehouse uses may be appropriate as log as they do not adversely affect the visual and rural qualities of the area and are adequately separated from residential uses. Commercial uses at Exit 17 should be limited. (Article 4, Section 4.04, Page 7) (Density: 1 dwelling per 4,356 sq ft w/ municipal water and sewer/ community septic or 1 dwelling per 10,890 sq ft w/ onsite septic)

Commercial District (COM). To provide designated areas to serve the needs of widely scattered residential developments with a range of retail, personal, professional and other compatible commercial type uses. (Article 5, Section 5.01, Page 1)

Industrial District (IND). To provide areas for manufacturing, wholesale, processing activities or related uses which are accessible to Arterial or Collector highways or railroad transportation facilities. (Article 5, Section 5.02, Page 2)

Agricultural District (AGR). To maintain, preserve and enhance agricultural lands, uses, and rural character of the Town of Colchester and to protect soil, water and other natural resources, to maintain, preserve and enhance open space lands and to protect these lands from suburban development. (Article 6, Section 6.01, Page 1) (Density: 1 dwelling per 25 acres)

Mobile Home Park District (MHP). To regulate the establishment and development of mobile home parks within residential areas. (Article 6, Section 6.02, Page 1) (Density: 1 dwelling per 15,000 sq ft)

Flood Plain District (FP). To minimize the adverse impacts of development upon the sensitive natural areas adjacent to Colchester's various watercourses and waterbodies and to minimize public and private loss caused by periodic flooding conditions, More specifically, to pursue the preservation of water quality, prevent pollution, avoidance of erosion, and protection of the ecology of streambeds and lands adjacent to

watercourses. Only open space uses not involving structures and impervious surfaces are intended for these areas. (Article 6, Section 6.03, Page 3)

Agricultural Mixed Use District (AMU). To maintain, preserve and enhance agricultural lands, uses, and rural character of the Town of Colchester and to protect soil, water and other natural resources, to maintain, preserve and enhance open space lands and to protect these lands from suburban development. (Article 6, Section 6.04, Page 5) (Density: 1 dwelling per 40,000 sq ft)

Figure 4-9 shows the town's overlay districts and the purpose of those districts is summarized below (Attachment C-1: Colchester Zoning Regulations):

General Development Four Commercial District (GD-4C). To limit high-volume commercial uses such as retail stores, drive-through banks, restaurants and gas stations within the General Development Four District. (Article 7, Section 7.01, Page 1)

General Development Four Openspace District (GD-4OS). To conserve open spaces of particular importance to viewscapes within the General Development Four District. (Article 7, Section 7.02, Page 2)

Shoreland District (SD). To preserve the natural growth and cover of the shorelines, to preserve water quality, to prevent pollution, to regulate development and appearance of the shorelines, to prevent erosion, to prevent nuisance, and to preserve the property rights of the shoreline property owners. The boundaries of the Shoreland District shall include all lands within 500 feet from the mean watermark of Colchester Pond, Winooski River, Lamoille River, and Lake Champlain. (Article 7, Section 7.03, Page 3)

Water Protection District (WPD). It is the purpose of this Section to provide for the protection and improvement of the surface waters and wetland within the Town of Colchester. These regulations and standards are intended to lead to the establishment and protection of natural areas along the Town's surface waters and wetlands to provide improved protection for water quality and the provision of open space areas and wildlife habitat. It is the further purpose of this Section to provide for the retention of preexisting residential neighborhoods located along surface waters and streams in a manner consistent with the resource protection goals of this Section and the Municipal Plan. (Article 7, Section 7.04, Page 6)

Historic Preservation District (HPD). To encourage the preservation and rehabilitation of historic structures within the Fort Ethan Allen National Register Historic District. Development should be sensitive to Colchester's historic and archaeological sites and structures as these serve as visible reminders of the community's past. Changes to historic structures should be sympathetic to the structure, and to the extent possible, in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. (Article 7, Section 7.05, Page 10)

The Town bases allowed density on "buildable acreage," which significantly limits development potential of land in many areas of Town. This provision, along with the dimensional and use standards of the zoning regulations and the Town's review process are actively used to maintain the rural character of lands not designated for higher density/intensity use. PUDs are held to the same standards related to calculating density as a conventional subdivision.

> The Board shall not approve an application if development is subject to adverse physical limitations which would be harmful to the safety, health and general welfare of the surrounding adjacent areas unless adequate methods to solve the physical limitations are established. Land subject to periodic flooding, poor drainage, inadequate capability to withstand structures including streets, utilities and buildings, or other hazardous conditions shall not ordinarily be developed or subdivided. (Attachment C-2: Colchester Subdivision Regulations, Article 3, Section 302, Page 22)
>
> The density or intensity of use shall not exceed that which could be permitted in the DRB's judgment if the land were subdivided into lots in conformance with the applicable zoning district in which the property is located. Additional residential units achieved through density bonuses and transfer of development rights shall be exempt from this provision. (Attachment C-1: Colchester Zoning Regulations, Article 9, Section 9.01C4, Page 1)

Further, Colchester has begun the process of establishing a Transfer of Development Rights (TDR) program. When fully implemented, the Town envisions this program being used to preserve agricultural lands in outlying areas by relocating development rights from farmland to the growth center and other designated receiving areas. The mechanisms for the TDR program have been written into Colchester's Zoning Regulations (Attachment C-1, Article 7, Pages13-14):

> A. Purpose. The Town of Colchester hereby establishes Transferable Development Rights, in accordance with 24 V.S.A. Section 4423 of the Vermont Municipal and Regional Planning and Development Act, in order to protect the agricultural resources and open spaces of the town and to promote residential development in areas that are consistent with the goals of the town's Municipal Plan.
>
> C. Sending Areas. Sending areas, or areas from which Transferable Development Rights may be acquired, shall include designated parcels within the Agricultural Mixed Use District (AMU).
>
> 1. TDR Calculation. Development rights available for transfer to the receiving area shall b assigned at the rate of one (1) TDR for each sending unit used in the R1, R2 & R3 Districts and one-and-one-half (1.5) TDRs for each sending unit used in all other receiving districts.
>
> D. Receiving Areas. The receiving areas, or areas within which Transferable Development Rights acquired in sending areas may be applied, shall consist of all land in the R1, R2, R3, GD1, GD2, GD3 and GD4 Zoning Districts.
>
> 3. TDR Usage Rates. Development my occur in conformance with the provisions of this section at the rate of one (1) Transferable Development Right for each one dwelling unit.

> 4. Maximum Permitted Density. In the GD3 and GD4 receiving areas, the maximum density may be up the three times the normal density indicated in Table A-2 provided the criteria of Section 4.03E3 and Section 4.04E3 are met.

All that remains to be done to fully implement the TDR program is for land to be rezoned into the AMU district. The Town has been working with agricultural property owners in the Shipman Hill area, whose farmland is considered of highest priority for conservation to determine the level of interest for inclusion in the AMU district. Secondarily, the town is considering opening up the TDR program to agricultural property owners in other parts of town. Most of the town's productive farmland is now included in the Agricultural District. While the Agricultural District has a density of one unit per 25 acres, the AMU district has a density of one unit per acre when transferring development to a receiving area, thus creating a significant return on investment for the owners of farmland willing to sell their development rights through the TDR program.

5.1. Summarize the desired mix of uses within the proposed growth center as envisioned in the municipal plan and allowed under the land use regulations, specifically identifying any steps the municipality is taking to encourage for mixed-use development within the proposed growth center.

The Colchester Town Plan describes the desired mix of land uses within the growth center as follows (Attachment A-1):

> Development for this area should be balanced in terms of residential and commercial development. As the growth center develops, residential density increases may be considered especially to help the commercial uses be more viable. Density increases could be achieved through transfer of development rights. While civic uses are permitted and encouraged in the growth center, the Town will maintain its core service area in the Town Services Neighborhood. Satellite town facilities, churches, and private schools could be developed within the growth center as it develops. (Page 10)

The Town's General Development 3 district allows the following uses either by right or conditionally: single-family dwellings, two-family dwellings, multi-family dwellings, congregate housing, boarding house, B&B, inn, emergency/temporary dwellings, home occupations and businesses, PRDs, convenience store (no gas sales), retail store (less than 10,000 sf), retail food (less than 5,000 sf), commercial greenhouse, automotive accessory sales (no installation), general merchandise rental, general office, laboratory, medical office/clinic, radio and television studios, financial institution, bank, personal/business services, artist studio, funeral home, laundry (walk-in or self-service), veterinary clinic, grooming facility, photocopying/printing shop, elementary school, trade/vocational school, colleges and associated facilities, religious use, cultural facility, social club, athletic facility, movie theater, theater (capacity less than 300), recreational facility, open air market, nursing care facility, day-care, restaurant (limitations on drive-thrus), bar, mobile food carts, parking garage, silviculture, cemetery, train station, bus station, town hall, community center, police station, fire station, ambulance services, post office, neighborhood/community/regional service facility, tower, temporary structure and PUD.

The GD-3 district includes provisions to encourage mixed-uses development (Attachment C-1, Article 4, Page 3) as follows:

> If the project is at least 50% commercial, the applicant may apply for a 50% residential density bonus. If the project is at least 50% commercial and the majority of the commercial square footage is provided within the same structure as residential units, the applicant may apply for a 100% residential density bonus.

5.2. Discuss the steps the municipality is taking to plan for and encourage residential development that meets the needs of a diverse population, including affordable housing, within the proposed growth center.

The build-out analysis indicates sufficient potential for residential development under the zoning regulations in the growth center (see Section One) to meet projected housing demand over the 20-year planning period. As stated in the Town Plan, Colchester anticipates that the growth center will accommodate most of the Town's high-density residential development over the next two decades (Attachment A-1):

> Colchester has a more than sufficient supply of residentially zoned land to sustain the current housing growth through 2020. It is anticipated that there will be greater demand for high-density residential zoning and lesser demands for moderate-density zoning such as R1 and R2 zoning as the need for smaller and more affordable dwellings increase. High density residential development will be primarily accommodated within the Severance Corners growth center. (Page 73)

The Town Plan also includes the following vision and policy statements:

> Colchester should continue to provide a wide variety of housing options. A sustainable rate of residential growth of approximately 88 new dwelling units a year should be maintained to meet local housing needs as well as to accommodate regional housing needs. It should be recognized that 88 units is an annual average and over the term of this plan there may be years where the number of units annually is exceeded or not met. Housing growth should occur in conformance with the Town's land use plan. As the community grows, care should be taken to maintain residential affordability and housing quality. Senior housing and starter homes should be a priority housing need for the community over the term of this plan. (Page 69)
>
> Density bonuses and other incentives for affordable housing, particularly starter homes and senior housing, should be considered to assist in meeting the Town's housing needs within medium and high density areas. (Page 74)
>
> Opportunities for affordable homes and senior housing, such as smaller dwellings on small lots, should be encouraged within the limits of zoning. (Page 74)

To implement those policies, the Town's PUD provisions include bonuses for congregate (attached or detached) and multi-family housing for people age 55 or older. There are also bonuses for mixed-use development in the General Development 3 district.

> 9.01D5 Congregate Housing Density Bonuses. The DRB may grant density bonuses for PUDs, which provide "Congregate Housing", as defined herein. Within these limits maximum density will be determined by the DRB after review of a density plan prepared by the applicant in accordance with other sections of this article. (Attachment C-1: Colchester Zoning Regulations, Article 9, Page 3)

In 2005, Colchester conducted a Housing Needs Assessment (Attachment A-3) to specifically analyze the Town's housing needs and recommends opportunities for overcoming identified obstacles. This study indicated that Colchester's existing supply of modestly priced homes provides substantial opportunities for families of moderate and low-incomes with 71 percent of Colchester's homes affordable to low-income families.

The dwelling units currently available and under construction within the new town center are indicative of the type of residential development Colchester will encourage within the growth center. That development includes units at a range of price points from $120,000 to $275,000. Such homes would be affordable to households earning between $38,000 to $87,000 per year. These units would meet the state's definition of affordable housing.

5.3. Discuss the steps the municipality is taking to plan for and encourage economic development within the proposed growth center, specifically describing how the growth center will support a healthy business climate in the designated downtown, village center or new town center associated with the growth center.

The build-out analysis indicates sufficient potential for non-residential development under the zoning regulations in the growth center (see Section One) to meet projected demand over the 20-year planning period. The Town Plan includes the following statements related to economic development (Attachment A-1):

> Colchester's economic development should continue to be focused within its existing commercial / industrial area at Exit 16 and its growth center at Severance Corners. These areas have been designated for commercial growth, benefit from municipal infrastructure, and should be where growth continues to be focused. (Page 63)
>
> Colchester has a history of supporting small business development which should be continued. Area businesses benefit from a small business loan program called the Partnership Fund. This fund was administered by the defunct Colchester Community Development Corporation. During the term of this plan the fund should be administered by Community Capital of Vermont which will offer loans up to $50,000. The Town should take measures to ensure that small businesses have access to similar services as it seeks to encourage continued economic development. (Page 62)
>
> The Town should maintain, at a minimum, one job per household. (Page 63)

The Town's zoning allows for a variety of commercial uses within the growth center, as described in response to Question 5.1. The Town intends to establish an office in support of its economic development efforts within the Severance Corners PUD (new town center).

5.4. Describe the extent to which large-scale commercial, industrial or institutional, and automobile-oriented uses currently exist in the proposed growth center, and discuss the municipality's policies and regulations related to such uses, specifically identifying all locations within the municipality where such uses will be accommodated.

There are no (and no plans for any) large-scale commercial, industrial or institutional, or automobile-oriented uses currently located within the growth center. Those types of uses are not allowed within the General Development 3 zoning district.

Colchester has land zoned for industrial and large-scale commercial uses near Exit 16 and to a lesser degree near Exit 17, off West Lakeshore Drive and off Sand Road. Land is zoned for neighborhood-serving commercial uses along Prim Road, West Lakeshore Drive, within Colchester Village and in several other scattered locations near existing neighborhoods (see Figure 4-8).

The Town's Zoning Regulations and development review process carefully ensure that such uses will be of appropriate scale and character for their location in order to minimize adverse impacts.

6.1. Describe the capacity of existing community infrastructure, facilities and services (as defined in 24 V.S.A. § 4382(4)), and summarize the municipality's plans to provide and finance the infrastructure, facilities and services needed to support projected growth and development within the proposed growth center over the 20-year planning period, citing specific provisions of the municipality's adopted capital budget and program.

Capital Budget and Program

The Town of Colchester first established a Capital Budget and Program decades ago in accordance with 24 VSA § 4430 and has continually updated it since. (See Attachment C-3).

Specific line items within the currently adopted budget will not show expenditures at the proposed growth center site because this is a newly developed area. The growth center is not being proposed in an existing developed area where capital expenditures have been historically applied.

Much of the initial capital expenditures at the proposed growth center are being constructed and paid for by private developers. Infrastructure within the growth center that is being paid for by private developers includes: streets, sidewalks, street lighting, public amenities such as benches and trash receptacles, electric power transmission facilities, stormwater infrastructure, and public common areas. Public sewer and water is currently available within the growth center; developers will pay for any extensions and hook ups.

Capital improvements cited in any municipal Capital Improvement Plan would identify either new municipally-funded construction, or improvements and repairs to existing infrastructure planned for the current fiscal year or the next five fiscal years. Since all of the infrastructure at the proposed growth center will be new, repairs and improvements are not anticipated over the next five years. A public/private partnership has been formed to provide a mechanism for funding future improvements.

Existing Infrastructure, Facilities and Services

Water

Colchester Fire District Three provides municipal water within the growth center, which it purchases from the Champlain Water District. A new 850,000 gallon water storage tank was recently built on Water Tower Hill to provide water to the area. Water is supplied to the growth center by a 16-inch and a 12-inch transmission main.

Total water supply demand for the growth center is 490,150 gallons per day. This represents the maximum demand at full build out. This amounts to an annual average increase of approximately 24,500 gallons per day. The water supply capacity from Water Tower Hill is nearly twice as large than the demand from the proposed growth center. In other words, this new capacity can service the entire Town of Colchester for the next 20 years and still have around 360,000 gallons left over. The Town is working with the Fire District and the Champlain Water District to address water storage issues, which are separate from water supply.

Figure 6-1. Water Supply Design Flow

Building Use[1]	Quantity[1]	Unit[1]	Multiplier	Total Flow (gall/day)
Single-Family Dwelling[2]	150	*gal/bedroom/day*	1,925	288,750
Multi-Family Units[2]	75	*gal/person 2 people per bedroom*	1,733	129,975
Public Assembly[3]	5	*gal/person/day*	300	1,500
Day Care Center	15	*gal/person/day*	50	750
Dentist Office	200	*gal/per chair/day*	25	5,000
Staff	35	*gal/worker/day*	25	875
Doctor Office	10	*gal/patient/day*	100	1,000
Staff	35	*gal/worker/day*	100	3,500
Other Health & Education[4]	35	*gal/worker/day*	203	7,105
Hairdressers	150	*gal/per chair /day*	25	3,750
Staff	10	*gal/worker/day*	25	250
Hotel/Motel/B&B	50	*gal/person/room*	50	2,500
Laundries	500	*gal per machine/day*	40	20,000
Restaurant	30	*gal/seat/day*	500	15,000
Retail[5]	100	*gal/day/store*	16	1,600
Office Employment[6]	15	*gal/per/day*	573	8,595
Total Water Design Flow (Gal/day)				**490,150**

(1) Source: VT DEC Wastewater Rule, Design Flows, Section 1-808

(2) Based on full build out potential of developable growth center parcels with density bonuses

(3) Estimated 300 seat capacity for pubic assembly

(4) Estimated # of stores is calculated by dividing total projected retail SF by an assumed average of 5,000sf per store. Zoning allows for nothing grater than 10,000sf

(5) Based on projected # of jobs in General Services, Professional Services and Information

(6) Accounts for the remainder of total projected Health and Education jobs after subtracting Doctors and Dentists

Wastewater

Wastewater infrastructure for the growth center will be supplied by South Burlington's treatment facility located at the Burlington International Airport. As of this writing, there is 110,000 gallons per day of treatment capacity allocated to the proposed growth center. This amount of capacity is adequate until the year 2015, based on current growth projections. By the year 2011, however, the growth center will have an additional 350,000 gallons per day capacity. The Town has an agreement with the City of South Burlington for this additional amount, which will be supplied by an expansion of this treatment plant. Construction is

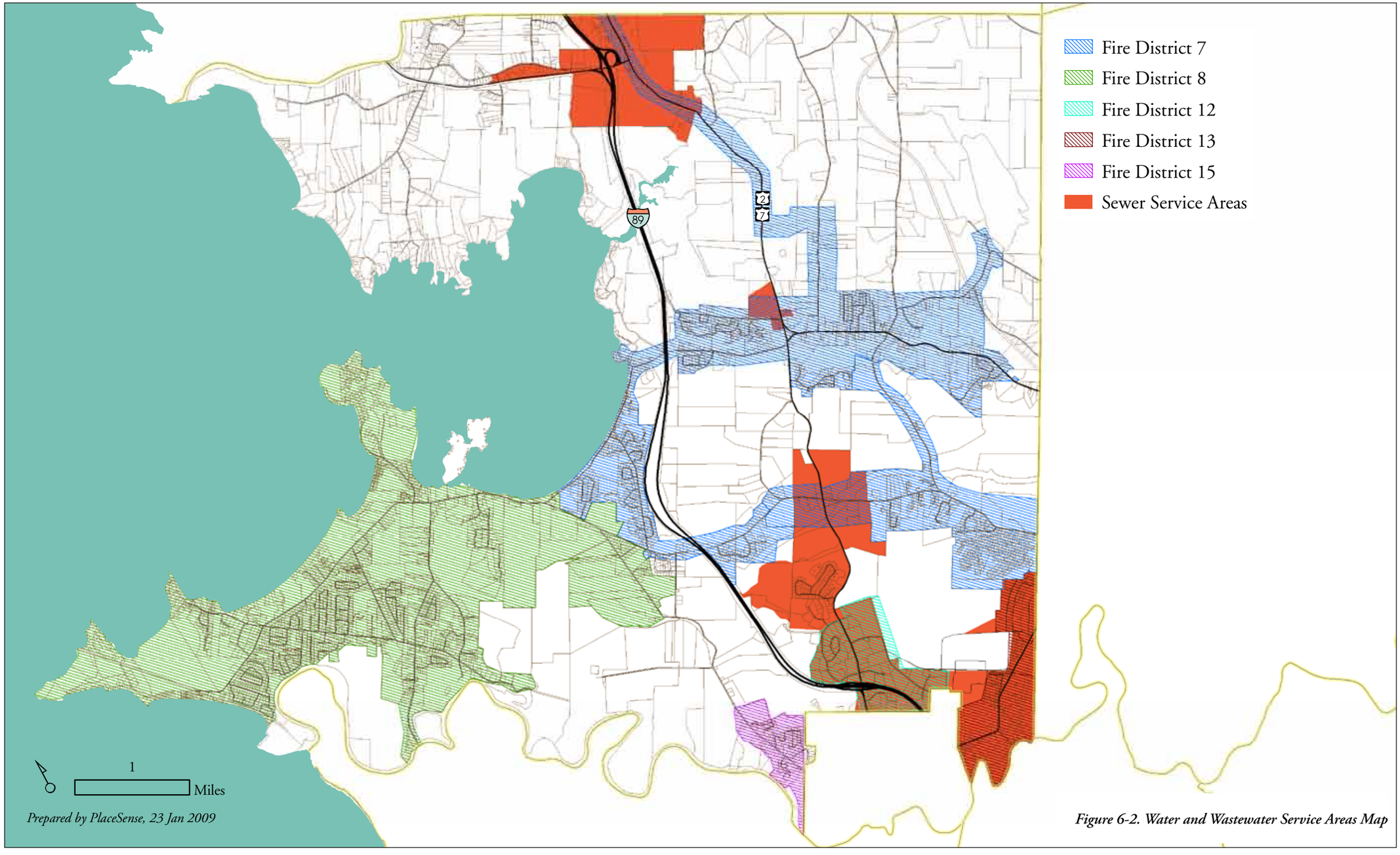


Figure 6-2. Water and Wastewater Service Areas Map

expected to begin in the spring of 2009. Therefore, by the year 2011 the growth center will have wastewater capacity of 460,000 gallons per day. This entire capacity is dedicated to the proposed growth center.

Figure 6-3. Wastewater Design Flow

Building Use[1]	Quantity[1]	Unit[1]	Multiplier	Total Flow (gall/day)
Dwelling Units[2]	210	*gal/unit/day*	1,926	404,460
Public Assembly[3]	5	*gal/person/day*	300	1,500
Day Care Center	25	*gal/person/day*	80	2,000
Dentist Office	200	*gal/per chair/day*	25	5,000
Staff	35	*gal/worker/day*	25	875
Doctor Office	10	*gal/patient/day*	100	1,000
Staff	35	*gal/worker/day*	100	3,500
Other Health & Education[4]	35	*gal/worker/day*	203	7,105
Hairdressers	150	*gal/per chair /day*	25	3,750
Staff	10	*gal/worker/day*	25	250
Veterinary/Pet Care	1	*gal/clinic/day*	1,500	1,500
Hotel/Motel/B&B	50	*gal/person/room*	100	5,000
Laundries	500	*gal per machine/day*	100	50,000
Restaurant	45	*gal/seat/day*	500	22,500
Retail[5]	100	*gal/day/store*	71	7,100
Office Employment[6]	15	*gal/per/day*	573	8,595
Infiltration	300	*gal/in pipe/dia/mile/day*	20.2	6,060
Total Water Design Flow (Gal/day)				**530,195**

(1) Source: VT DEC Wastewater Rule, Design Flows, Section 1-808

(2) Based on full build out potential of developable growth center parcels with density bonuses

(3) Estimated 300 seat capacity for pubic assembly

(4) Estimated # of stores is calculated by dividing total projected retail SF by an assumed average of 5,000sf per store. Zoning allows for nothing grater than 10,000sf

(5) Based on projected # of jobs in General Services, Professional Services and Information

(6) Accounts for the remainder of total projected Health and Education jobs after subtracting Doctors and Dentists

If the proposed growth center reaches full build out, it will generate a demand for 530,195 gallons per day of wastewater capacity. However, to reach this demand the density bonuses on all future development projects would have to be maximized. This is an unlikely scenario. It

is reasonable to assume that some projects will achieve a maximum density bonus but others may only increase densities by half of their total bonus potential or even less. Therefore, maximum density bonuses were reduced by 25 percent to calculate wastewater demand. At a 25 percent reduction in density bonus there is a demand for 463,872 gallons per day. A 50 percent reduction in density bonus would result in a wastewater demand for 328,002 gallons per day. If the growth center is built out over the 20-year planning period, and density bonuses are allocated at an average of 75 percent or less of the full potential, then there will be adequate wastewater capacity.

Public K-12 Schools

Colchester is significantly influenced by its educational institutions. The Colchester School District oversees elementary and secondary education for the community within its five school facilities: Union Memorial (K-2), Porters Point (K-2), Malletts Bay (3-5), Colchester Middle School (6-8) and Colchester High School (9-12). These facilities have a total capacity of 2,631 students and as of the 2007-08 school year had a total enrollment of 2,270. The district has 369 employees and is one of the largest employers in Colchester.

According to the Colchester School District, the Town's school system has had ample capacity for the past 10 years. Looking forward the next five years, the district expects that enrollment will continue to decrease with capacity remaining the same at 2,631 students. The projections for school age children in Chittenden County continue to decline as a percentage of total population.

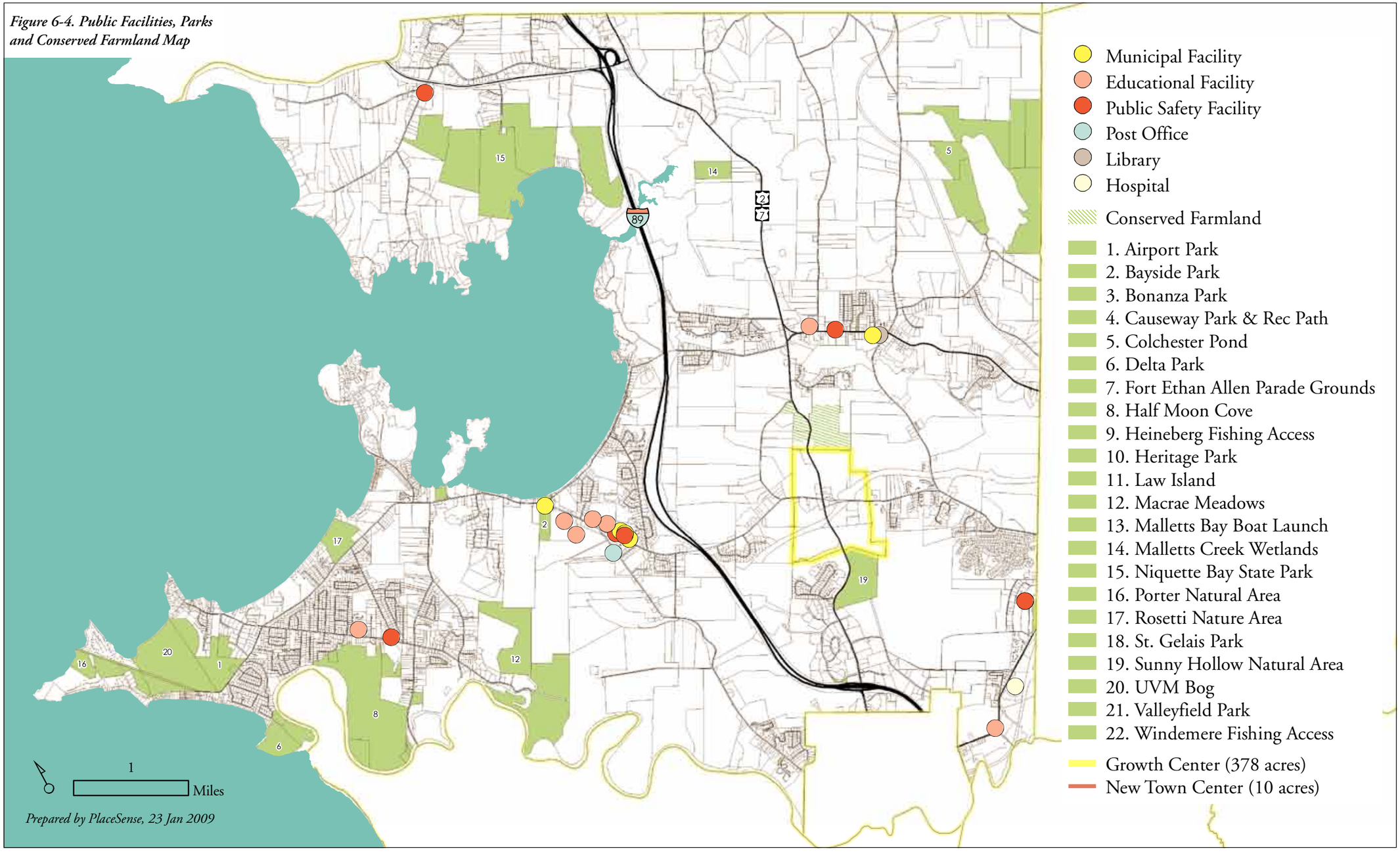
At this time there are no projections of school age children beyond the year 2020. Planners are hearing through professional journals and colleague dialogue that fertility rates of women are expected in increase (to be confirmed by Census 2010) and therefore in the second half of this planning period (2020-2030) the percentage of school age populations may begin to increase. However, it would take an unnatural adjustment to return to 2000 levels. Even if the number of students did return to 2000 levels by the year 2030, the Colchester School District has enough capacity to accommodate them.

Parks and Public Facilities

The Town currently has 12 significant parks, public facilities and natural areas (see Attachment B-4: Public and Conservation Land Map), in addition to the 550-acre Niquette Bay State Park on Lake Champlain. The town's parks include:

- Airport Park with 64.5 acres of ball fields (4), soccer fields (2), trails, volley ball, tennis courts, pavilions, picnic areas, play grounds and more. The Town Pan anticipates more expansion at this park;
- Bayside Park with a swimming beach, bathhouse, rest rooms, pavilion, skate board park, Senior Center, tennis, shuffleboard, baseball field, softball field, play ground;
- Bonanza Park with a ½ acre of land an open field and a play ground. There is room for expansion at this site.
- Causeway Park and Recreation Path, a 4 mile recreation trail along Lake Champlain;

Figure 6-4. Public Facilities, Parks and Conserved Farmland Map



- Colchester Recreation Path, a 3.3 mile handicapped accessible recreation path that connects Colchester Village to Mallets Bay;
- Heineberg/Billado Park with 4 acres and access to the Winooski River. This park has room for expansion and is planned for additional recreational amenities;
- Heritage Park, one acre in Colchester Village off Main Street that includes a play ground, tennis and basketball;
- Law Island, an 8.5-acre natural area accessible by water only;
- Porter Natural Area, a 56-acre natural area that is undeveloped at this time;
- Rossetti Natural Area, a 47-acre natural area that is planned for additional improvements for trail based recreation and lake access;
- Sunny Hollow Natural Area, an 80-acre natural area that trails and room for expansion; and
- Valleyfield Park, a neighborhood park in Mallets Bay area with a play ground and all purpose field.

The planned developments currently approved for the growth center include recreation amenities including sports courts, playgrounds, paths and trails. Future development within the growth center will provide similar facilities as required by Colchester's Zoning and Subdivision regulations:

> 3. Open Space. Open space or common lad shall be set aside and made a part of any PUD subject to the below listed specific requirements (Attachment C-1: Colchester Zoning Regulations, Article 9, Section 9.01D, Pages 2-3):
>
> > a. The DRB may require that up to 25% of the gross area proposed for development shall be set aside for open space.
> >
> > b. Open space land may, at the discretion of the DRB, be utilized fully or partially as active or passive recreational areas. In GD-2, GD-3, and GD-4 Districts structured recreational areas such as parks are encouraged.
>
> Section 316: Recreation Areas. Land shall be set aside for passive and active recreational purposes as deemed necessary by the Board on any plat submitted for Board approval. All such areas shall be of a reasonable character for park or other recreational uses. The Board shall not require more than fifteen percent (15%) of the area of any plat being set aside for park or recreational purposes. (Attachment C-2: Colchester Subdivision Regulations, Page 27)

The Town is planning to expand its public park system to accommodate future population growth and recreation demand. Colchester has many opportunities to accommodate the recreation needs of future growth within the Town. Colchester charges a recreation impact fee to each new unit of housing. The Town expects to reevaluate the fee structure to reflect current costs of services and planned projects.

While Colchester currently has a Senior Center, there is also an identified need for a Teen Center and a Community Recreation Center. Plans for these facilities are in the preliminary

stages. The Town purchased property on East Lakeshore Drive and Blakely Road several years ago and has been engaging the public on the possibility of using the site for a recreation facility.

Solid Waste

Colchester is a member community of the Chittenden Solid Waste District (CSWD), which disposes of the county's trash and oversees recycling, waste reduction and composting program. While Colchester once had an active landfill in the vicinity of Exit 16, Colchester now exports its waste and recycling via the district. The CSWD is fully prepared to accommodate 20 years of future waste generated by all of its member municipalities and has not indicated otherwise. There is no reason not to rely on them for future waste removal.

Stormwater

Colchester is a MS4 community with stormwater impaired watersheds. The Town has collaborated with several other communities to form the Chittenden County Regional Stormwater Education program in an effort to educate the greater community about stormwater runoff. Colchester has developed several action plans regarding stormwater including an integrated water resources plan, a stormwater management plan, an illicit discharge detection plan, and a stormwater outfall assessment plan. Some of the various on-going actions the Town has taken to ensure against stormwater becoming a threat to public health, the environment and the economy of the community include water quality monitoring, maintenance plans for public infrastructure, storm drain stenciling, the implementation of various ordinances, and capital plans.

The Town has recently adopted Chapter 18 of the Colchester Code of Ordinance regulating stormwater (see Attachment C-7). This regulation ensures that projects that can affect water quality, but do not trigger state review, are reviewed at the local level for stormwater management and erosion control. New stormwater treatment facilities that treat runoff from public infrastructure constructed as a part of developments are required to enter into co-applicancy agreements with the Town to define responsibilities, ownership, and permitting obligations. Colchester also has Public Works Specifications that details the requirements for all new storm drainage infrastructure being constructed in Town (see Attachment C-8, Section 3).

> Under the authority set forth in 24 V.S.A § 2291, specifically subsection (14), these Storm Water Regulations define what constitutes a public nuisance relating to illicit discharges, soil erosion and storm water management related to land disturbance activities. These regulations also provide procedures for the abatement or removal of such public nuisance as the public health, safety or welfare may require. This Ordinance also establishes methods for controlling the discharge of sediment, storm water and non-storm water discharges into the MS4, and/or surface or ground water in order to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit process, and General Permit No. 3-9014 as issued by the State of Vermont. (Attachment C-7: Stormwater Ordinance, Section 18-1, Page 2)

> Applicability of Erosion and Sediment Control. This Article applies to any land disturbance activities within the jurisdictional area of this Ordinance that result in less than 1 acre of clearing, grading, construction or land disturbance activity, unless otherwise exempted under Section 18-22 of this Article. (Attachment C-7: Stormwater Ordinance, Section 18-19, Page 14)
>
> Applicability of Storm Water Management. This Article applies to any land disturbance activities within the jurisdictional area of this Ordinance that result in greater then or equal to 1 acre of clearing, grading, construction or land disturbance activity, and creates less than 1 acre of impervious surface, unless otherwise exempted under Section 18-33 of this Article. (Attachment C-7: Stormwater Ordinance, Section 18-30, Page 18)

Colchester is continually seeking methods to effectively and efficiently treat stormwater. The Town has begun to implement an Environmental Protection Agency Demonstration Grant that will look to town-wide water quality issues and holistic solutions. While one long-term solution may possibly be the development of a comprehensive stormwater utility, the Town does not envision implementing such a program in the near-term given its current focus on addressing water quality issues through an aggressive public education effort, strong regulations related to streambank, shoreline and wetland buffers, and local on-site septic permitting.

Public Safety

The Colchester Volunteer Fire Company and the Mallets Bay Fire Department provide fire prevention and suppression services in Colchester. Both of these organizations are independent entities from the Town, but receive funding from the Town budget in exchange for these services. Fire suppression services for the proposed growth center will come from these organizations and the water to service this area will come from the storage facility at Water Tower Hill. As described above, there is amble capacity for this effort and the water is owned by the Fire District.

The Colchester Police Department is a department within town government. The police department is currently planning an expansion. Renovations to accommodate future growth and demand for police services were planned well before this growth center application. This renovated structure is expected to be adequate to serve the needs of the Town for the next 20 years.

6.2. Discuss the steps the municipality is taking to maintain a rate of growth that will not exceed the municipality's ability to provide or finance required community infrastructure, facilities and services over the 20-year planning period.

Colchester's Town Plan establishes a reasonable rate of growth for the Town as follows (Attachment A-1):

> A sustainable rate of residential growth of approximately 88 new dwelling units a year should be maintained to meet local housing needs as well as to accommodate regional housing needs. (Page 69)

The projected increase of 1,305 households townwide by 2030 represents an average increase of around 52 household a year between 2005 and 2030. This rate of growth is well within the level deemed reasonable in the Town Plan.

7.1. Identify all existing or planned public spaces located within the proposed growth center and summarize the steps the municipality is taking to plan for, provide and/or maintain public spaces, including open space and public recreation facilities, within the proposed growth center.

Colchester will own a building within the new town center, which is currently being planned to house a satellite library and office space for economic development and the local chamber of commerce.

The General Development 3 zoning district allows for public and civic land uses including: elementary school, trade/vocational school, colleges and associated facilities, religious use, cultural facility, social club, athletic facility, theater (capacity less than 300), recreational facility, open air market, day-care, cemetery, train station, bus station, town hall, community center, police station, fire station, ambulance services, post office, neighborhood/community/regional service facility.

Community spaces and amenities have been incorporated into the three approved developments as detailed below. The spaces and amenities are anticipated to remain privately owned and maintained, but the Town has conditioned approval on providing public access to amenities like gazebos, greens and open air markets. (See Attachments C-4, C-5 and C-6).

Figure 7-1. Playground in the Severance Corners PUD

The new town center (Severance Corners PUD) will include a 60 foot by 290 foot central green with gazebo, several smaller gazebos and park benches, walking paths, an area for a farmer's market, an informal green to be utilized as an informal field, and a tot lot playground.

Sunderland Corners PUD will include:

1. A central green to serve as a visual center of the development as well as a social center. The central green will include a gazebo designed to enhance the aesthetics of the area, as well as to provide an area for passive recreational use. There will also be tables under a cable and wood structure that will be covered in vines to allow shade in summer months and allow sun through during winter and spring.

2. An open air market, which will include a long-roofed colonnade with a central pavilion at the front of the project, adjacent to Severance Road, which may include a farmer's market, art shows or other open air activities.

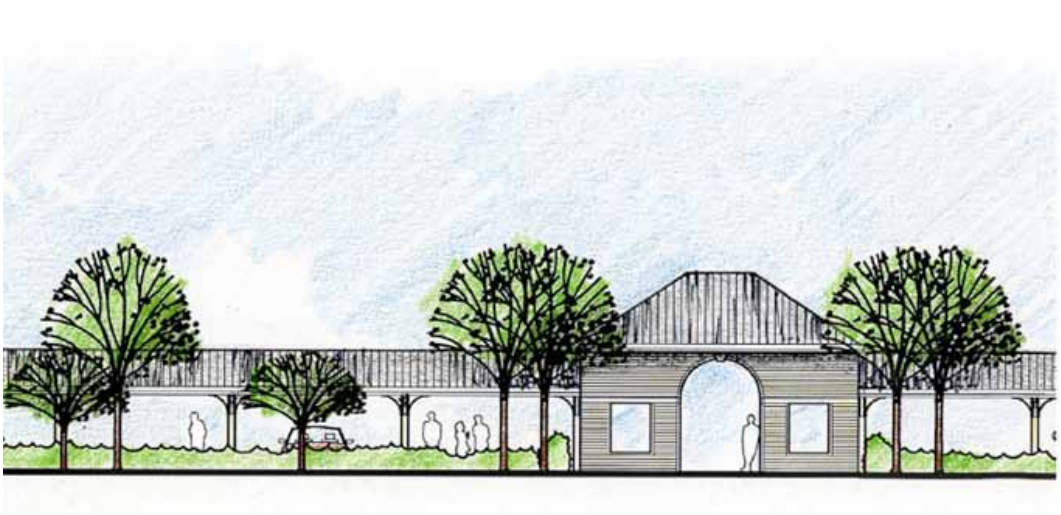
3. Sidewalks, multi-use recreation pathways, internal walkways, open space trails, nature trails and a foot bridge, for connecting pedestrian circulation throughout the development.

4. Sitting and picnic areas throughout the development to allow users to stop and rest or to sit and enjoy at their leisure.

5. A clock tower to enhance the visual aesthetics of the community and help create the desired small town setting.

6. A multi-use court and play area as well as a community room. The general use room will allow indoor gatherings and will be available for use by neighborhood social groups, children's activities, and meetings of the homeowner's associations.

Figure 7-2. Illustration of the Colonnade Planned for the Sunderland Corners PUD



Owls Glen PUD will include:

> A network of informal off-road pedestrian trails to link the site's natural areas together. Benches will be located at focal points along a bike path. The pond area or wet areas bisecting the Owls Glen loop will be utilized as points of visual interest along the proposed trail as well as views of the mountains to the east. A formal recreation area will be located at the intersection of public streets "A" and "D".

As detailed in response to Question 4-2, the standards of the GD-3 district require the creation of public spaces and amenities as part of any new development. Further, there will likely be more than 80 acres of open space, much of which will be accessible only via the growth center's planned pedestrian/bicycle path system, within the growth center. The State of Vermont owns a significant amount of land in the area, most of which was acquired to accommodate the planned Circumferential Highway. However, the state also acquired a 21-acre piece of land south of the highway right-of-way and north of Sunderland Brook and an eight-acre parcel along the brook. It is likely that these will remain undeveloped in order to mitigate natural

resource impacts associated with highway construction within the CIRC right-of-way. Across Roosevelt Highway, the 50-acre parcel at the southern end of the Ireland PUD has also been protected as a natural area as a condition of the development's approval; it too is only accessible via the growth center.

7.2. If existing public buildings/uses (post office, municipal office, school, library, etc.) are not included within the proposed growth center, explain the municipality's rationale in drawing its growth center boundary to exclude them.

Historically, Colchester has not had a single center. Instead, since the incorporation of Winooski as a separate municipality, the Town has had multiple centers - each of which has grown and developed in response to changing economic conditions and transportation corridors. As a result, Colchester's public buildings and uses are scattered throughout the Town (see Figure 6-4, page 6-7).

The Town examined the potential for centering its growth in or around Colchester Village. It determined that this traditional village center is largely built-out, and significant increases in the density and intensity of development would destroy the historic character (including several National Register listed structures) valued by residents. The village as a whole is not served by municipal wastewater, as described in response to Question 2-3, and there are no plans to provide such service. Further, the lands immediately adjacent to the village center include some of Colchester's most productive farmland. Some of this land has already been conserved (100-acre Button farm), which limited the ability to link the Severance Corners area to Colchester Village. The Town Plan (Attachment A-1) includes the following:

> This area has much of the character expected of New England villages but not found elsewhere in Colchester, including old homes close to the road, small stores, churches, small businesses and public buildings all in a compact setting close in proximity to a rural area. Throughout public input sessions on this neighborhood, many of the business owners and residents of the Village expressed that they liked the current character. (Page 17)

The Town also considered the implications of extending the proposed growth center west along Blakely Road to incorporate the cluster of public buildings and uses located between the interstate and Malletts Bay. It was determined that such an extension would not be beneficial for the Town for the following reasons:

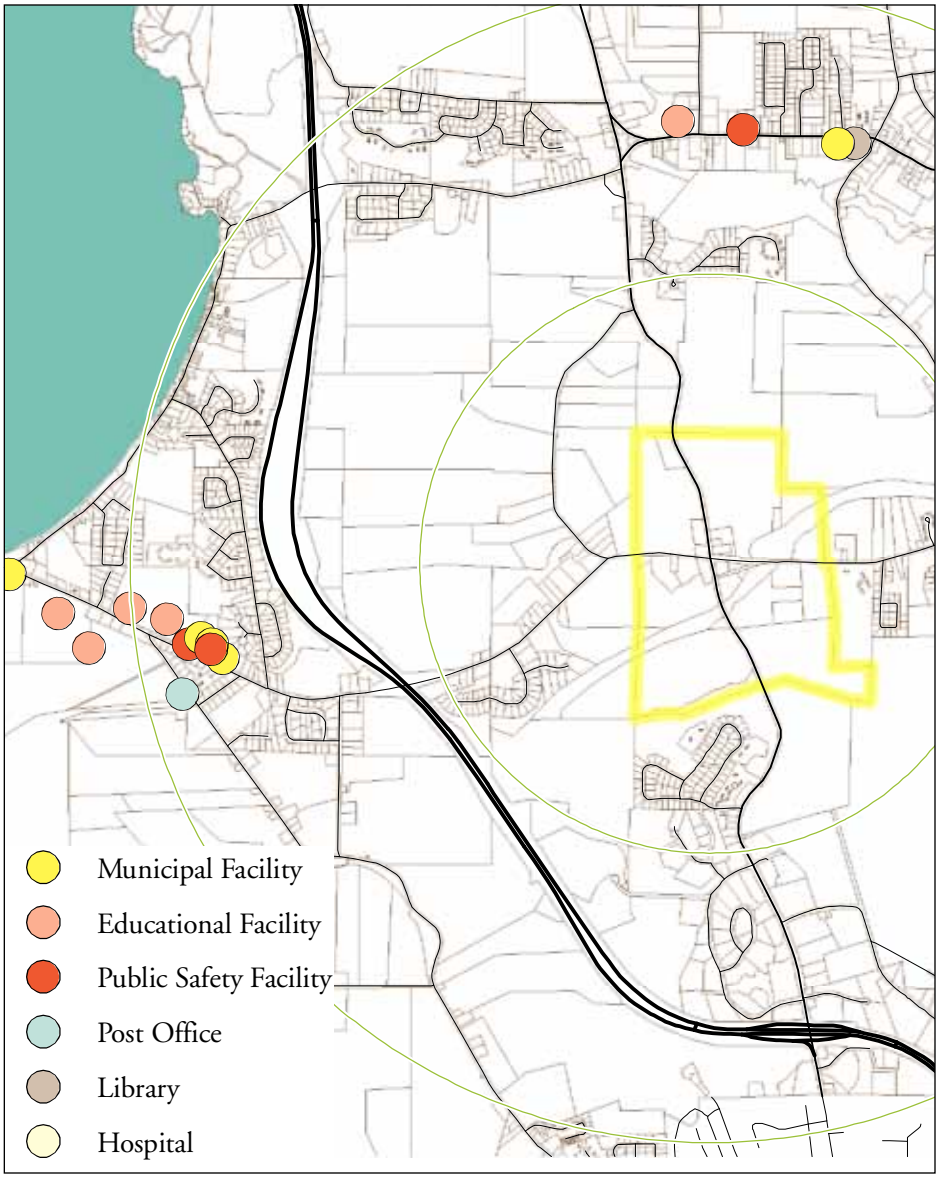
- The growth center would not be as compact and walkable.
- The growth center would become more of a linear corridor and would not be extending out from the designated new town center.
- Additional agricultural land would have to be included within the growth center and there would be considerable pressure from property owners to extend the growth center to encompass even greater amounts of productive agricultural land.

The Town Plan includes the following land use policy (Attachment A-1, page 20):

While Severance Corners is designated as the Town's growth center, the Town Service Center is significantly removed from the growth center both in distance and by the presence of geographical and physical barriers. For these reasons, the Town Services Center should remain separate and distinct from the growth center.

Many of the public facilities located in Colchester Village or along Blakely Road are within biking distance (2 miles) of the growth center as shown in Figure 7-3. The town plans to link these areas to the growth center through its sidewalk and multi-use path system as described in response to Question 9.1.

Figure 7-3: Distance of Public Facilities from the Growth Center



8.1. Identify the focal point(s) around which the proposed growth center will be organized.

As Colchester's growth center is not an extension of a historic downtown, it is not anticipated to have a single central focal point like a village green, major public building, monument, etc. As described in response to Question 7-1, the Severance Corners and Sunderland Corners PUDs are each organized around internal focal points like greens and major buildings. Informal gathering places, such as the two restaurants now open in the new town center, will be located within the developments.

It is likely that redevelopment of the smaller lots near the Severance/Blakely Roads and Route 2/7 intersection would create more of a central focus around the intersection. As shown in the conceptual plan for the growth center (see Figure 4-6, page 4-5), there is opportunity to bring development in close to the road, as called for in the standards of the GD-3 district. The objective of that district is to create and maintain a compact streetscape with buildings fronting on the sidewalks along Severance and Blakely Roads, Routes 2 & 7. Multi-story buildings located along the sidewalk would create a definite 'downtown' character at the intersection. Redesign of the intersection as a roundabout would create an opportunity for establishing a defining, gateway feature in the center of the roundabout such as a work of art, memorial or a fountain, etc.

Figure 8-1. Restaurants in the New Town Center

8.2. If the growth center is associated with an existing downtown or village center whose form is linear, summarize the steps the municipality is taking to establish a new development pattern that creates depth as opposed to continuing the linear pattern and/or describe any constraints that limit creating greater depth.

Neither Colchester's new town center nor the proposed growth center are linear in form.

8.3. Describe the extent to which the municipality is planning for and/or requiring development of an interconnected street network within the proposed growth center.

It is the Town's intent to promote development of an interconnected street system within growth center. The Town's Subdivision Regulations include the following standards (Attachment C-2):

> Section 310. The arrangement of streets in the subdivision shall provide for the continuation of streets of adjoining subdivisions and for proper projection of streets through adjoining properties which are not yet subdivided, in order to make possible necessary fire protection, movement of traffic and construction or extension presently or when later required, of needed utilities and public services such as sewers, water and drainage facilities. To this end, the use of a grid or block pattern for streets is encouraged. Design and layout of cul-de-sacs shall provide for possible future streets and extensions to other subdivisions or other properties not yet subdivided. (Page 24)

It must be recognized, however, that the growth center faces some challenges outside the control of the Town or developers. Existing and planned highways divide the growth center; the state controls access to and across these rights-of-way. Given the existing major intersection, the planned on/off ramps and the planned CIRC highway, there will likely be few new opportunities for vehicular connections across the state rights-of-way that bisect the growth center. Therefore, the Town has been working with the growth center developers, the Metropolitan Planning Organization, the Transit Authority and VTrans to provide pedestrian/bicycle and transit connections throughout the growth center.

Ideally, growth center residents will be able to walk or bike to jobs, shops, offices, recreation facilities, etc. located within a reasonable travel distance due to the compact size of the growth center and the path system that is being developed. Colchester is building a robust multi-use path system, as described in response to Question 9-1. The path system will connect bicycle travelers from throughout Colchester, and beyond as the Town's system connects to the larger regional path system, to the growth center. Further, those workers, shoppers or other visitors that will travel to the growth center by automobile will be able to park and access various locations on foot, as will those who arrive by bus.

The Town is not permitting automobile-dependent land uses like drive-thrus, large-scale retail stores, or storage/distribution businesses within the growth center. The growth center is not envisioned to become a place where one has to drive from location to location, with sidewalks and pedestrian connections an afterthought. It is intended that sidewalks, paths and trails will become the primary transportation infrastructure within the growth center. The growth center is being planned to be a mixed-use neighborhood, where people can live within walking or biking distance of their place of work, or near a bus stop, so they will not be as dependent on personal automobiles as Town residents are today. Many of those who choose to live in the growth center will be doing so precisely because of their preference for that kind of lifestyle.

9.1. Describe the facilities/provisions that exist and are planned for pedestrian and other non-vehicular traffic within the proposed growth center, specifically identifying the steps the municipality is taking to promote a safe, pedestrian-friendly environment within the growth center in general and specifically within the associated designated downtown, village center or new town center.

The Growth Center is planned to facilitate a smart growth, pedestrian-friendly environment. The 2007 Colchester Town Plan states (Attachment A-1, Page 9):

> The Town adopted General Development 3 zoning for this area [Severance Corners] to promote a dense, mixed use village type development pattern for this area. The area is intended to contain pedestrian amenities and connectivity, community spaces and access to public transportation. Development in this area should be balanced in terms of residential and commercial development. As the growth center develops, residential density increases may be considered especially to help the commercial uses be more viable.

The zoning for the proposed growth center implements this planning goal. The stated purpose of the GD-3 District is (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03A, Page 3):

> To provide compact mixed use development within the Severance Corners neighborhood. Businesses and residential uses should be developed to complement each other. Pedestrian accessibility, aesthetics and public spaces are to be emphasized; Development should be permitted and encouraged as long as it is complimented, within each development unit, by public amenities, open space, and aesthetic site and building design.

The zoning bylaws for the GD-3 district require internal sidewalks to be owned and maintained by developers and/or owners' associations. Standards for the GD-3 zone state:

The objective is to create and maintain a compact streetscape with buildings fronting on the sidewalks along Severance and Blakely Roads, Routes 2 & 7, and new interior roadways. Whenever possible, all parking lots shall be located behind buildings and adequately screened from Severance and Blakely Roads and Routes 2 & 7. (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03F1, Page 4)

The Selectboard adopted a bike-pedestrian plan for the entire growth center (see Attachment A-5). The plan includes recommendations for a shared path system and a network of sidewalks to provide internal connectivity for the growth center and to provide linkage to other residential neighborhoods and to the town service center (see Figure 9-1). Colchester will use the information and recommendations in the plan as the foundation for municipal land use permits issued as the growth center is built out. The Bike and Pedestrian Circulation System Plan (Attachment A-5, Page 1) states:

> The pedestrian and bicycle circulation system being considered for this study includes sidewalks, shared use paths, crosswalks and on road bicycle facilities with the following configurations. Unless otherwise indicated, the facilities recommended in this report should meet these descriptions:

- Sidewalks are five feet wide, constructed of concrete and designed for pedestrian use;
- Shared Use Paths are ten feet wide and typically surfaced with asphalt or finely crushed stone; They are designed to be used by pedestrians and bicyclists, and depending on the surface, in-line skaters and other non-motorized forms of transportation;
- Shared use shoulders are the paved portions of the highway contiguous with the outside travel lane of roadways that are delineated by a stripe on the pavement, are developed to meet State Roadway Design Standards, and can be used by bicyclists as well as pedestrians, stopped vehicles and emergency uses; and
- Crosswalks, as defined in this study, are considered to be marked on the pavement in some form.
- If environmental or physical constraints make the construction of a 10-foot wide shared use path difficult, they can be constructed at only eight to nine feet wide and still meet current federal and State recommended widths. Paths designed at less than eight feet wide would require design exceptions to be eligible for federal funding.

The adopted zoning bylaws also implement this pedestrian plan. Development standards for the GD-3 zone state (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03F2(a), Page 5):

> Continuous internal pedestrian walkways, no less than 5 feet in width, shall be provided from the public sidewalk or right-of-way to the principal customer entrance of all buildings on the site. At a minimum, walkways shall connect focal points of pedestrian activity such as, but not limited to, transit stops, street crossings, building and store entry points, and shall feature adjoining landscaped areas that includes trees, shrubs, benches, flower beds, ground covers, or other such materials for no less than 50 percent of its length. Sidewalks, no less than 5 feet in width, shall be provided along the full length of the building along any façade featuring a customer entrance, and along any façade abutting public parking areas.

Development standards for this zoning district ensure that new construction is pedestrian oriented. For example the standards state (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03F2(d), Page 6):

> Outdoor furniture such as benches and other forms of seating, trash receptacles, lighting, etc. should be located for the convenience of the pedestrian… receptacles are best sited in the shade downwind and a respectful distance from pedestrian noses,… No dumpster or compaction areas, loading or other such uses shall be located within 50 feet of any public street or within 20 feet of any public sidewalk or internal pedestrian way.

A second plan also calls for pedestrian improvements at the site. The Chittenden County Bicycle and Pedestrian Plan includes the future development of an east-west shared use path

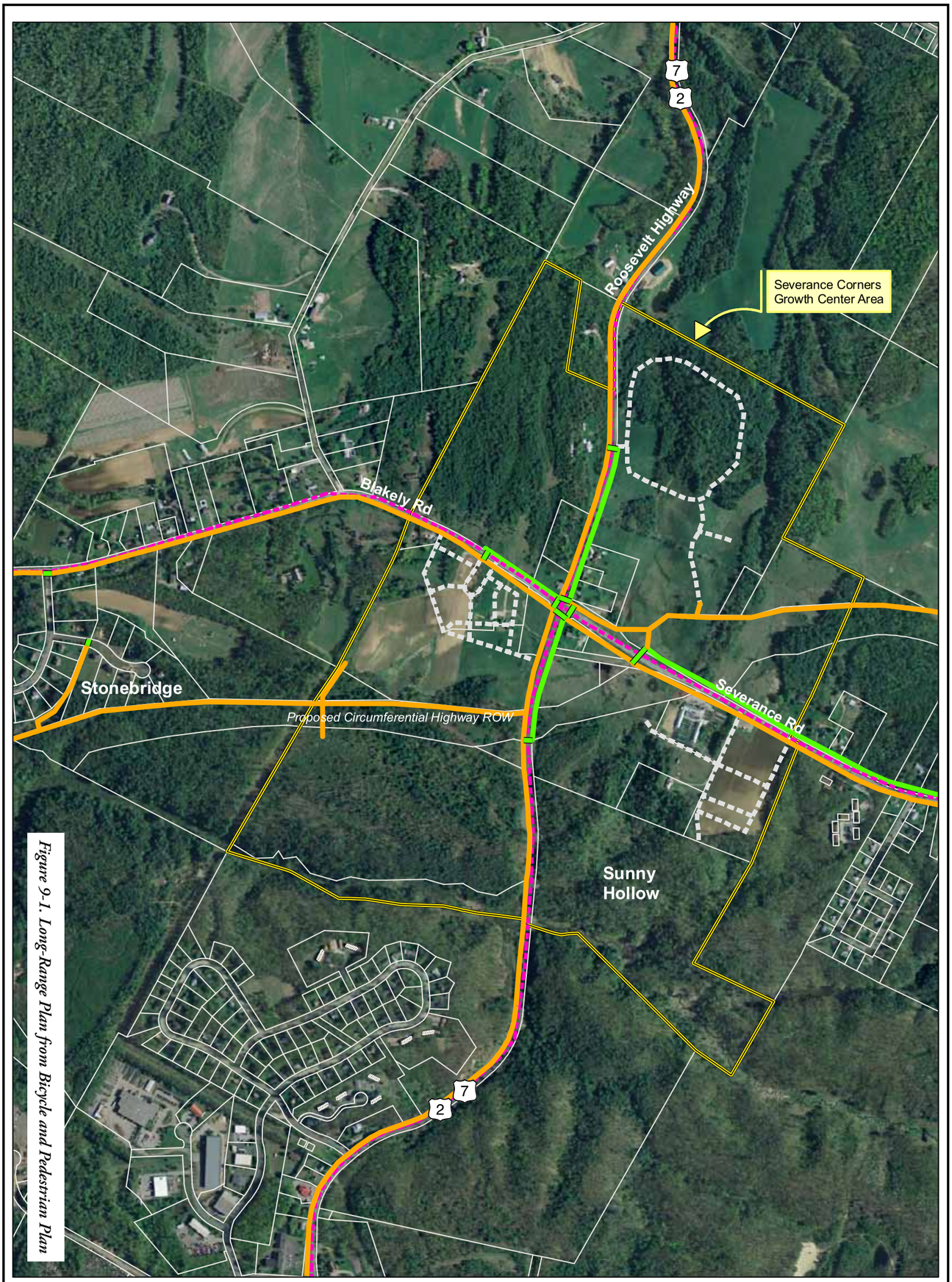


Figure E: Long Term Regional Connections

Severance Corners, Colchester, Vermont
Chittenden County Metropolitan Planning Organization

Legend

- Severance Corners Growth Center
- Proposed Development Roadways
- Crossings
- Sidewalks
- Shared Use Paths
- On Road System

N
W E
S

0 250 500 1,000 1,500 2,000 Feet

Wilbur Smith Associates

4/9/2007

CCMPO

www.ccmpo.org

near Severance and Blakely Roads. This plan also calls for the eventual development of an on-road bicycle facility on Roosevelt Highway.

The bike-ped facilities planned for the growth center are part of a larger multi-use path network throughout the town as described in the Town Plan (Attachment A-1, Page 87):

> There are several classes of multiuse paths; Class I are fully separated from roads, Class II paths are striped lanes along roads, Class III paths are roadways that are signed but otherwise not improved for bicycle travel.
>
> Class I and II multiuse paths exist along Porters Point Road, between Bayside Park and Creek Road, and from Delta Park to the Causeway. The extent of Class II paths has been significantly increased through the Capital Transportation Plan. Bay Road, Prim Road, portions of Malletts Bay Avenue, Church Road, Severance Road, Hercules Drive and Heineberg Drive have Class II multiuse paths. To the greatest extent possible, all areas of Colchester should connect its multiuse paths and tie into the paths of adjacent Towns.
>
> Planned Multiuse paths include those shown on the Official Map including a Class I multiuse path along the Circumferential Highway. The Town has undertaken several sections of the trunk-line from Colchester Pond to Airport Park and plans to construct more components of this route through the Capital Transportation Plan and the TIP including Prim Road and Route 2A. Severance Corners is currently under construction and multiuse paths are being constructed as part of this project. Other projects likely to be completed within the near term include multiuse paths along Route 15 and the first phases of the Exit 16 Pedestrian and Landscape Project along Roosevelt Highway.

9.2. Describe the current level of public transit service/facilities serving the proposed growth center and the extent to which improvements in public transit service/facilities are planned for the proposed growth center, specifically citing any steps the municipality is taking to enable transportation alternatives within the growth center in general and within the associated designated downtown, village center or new town center.

Existing public transit consists of bus service provided by the Chittenden County Transportation Authority (CCTA) along the Route 15 corridor and to the Franklin County transit line stop at the park-and-ride at Exit 17. Colchester is not currently a member of CCTA and voters have rejected proposals that the Town join CCTA on several occasions. Therefore, the proposed growth center is not currently serviced by public transit.

At this time, Colchester is again exploring the feasibility of joining CCTA. The Town has formed a working group dedicated to coordinating this effort. The CCTA-Colchester Transit Working Group met in May and October 2008 to discuss the need for alternative transportation in Colchester and specifically looked at providing bus service. The group has focused on the Route 7 corridor, where the businesses and property owners have indicated a strong interest in

transit services and where new service is most feasible at this time due to Milton's agreement to fund a portion of a new commuter route.

Based on an informal transit survey conducted in July 2008, data from CCTA, and input from the CCTA-Colchester Transit Working Group, Colchester is considering a two-phased approach to expand CCTA services in Town. As part of this approach the voters would need to vote to join CCTA. The Town's focus would initially be on paying its share of the Route 15 corridor route and participating in a route that would offer service along Route 7 from Exit 16 to Severance Corners.

The proposed new route would connect from downtown Burlington through Winooski on Route 7 to Milton with possible Colchester stops at Maplefields/Shaw's at Exit 16, Severance Corners, Creekside Plaza and Exit 17. This service would have two buses in the morning, a midday bus, two evening buses and a late evening bus. Colchester would need to fund the local share for one of the two buses that would provide service on the route.

Colchester is considering adopting a one percent local rooms, meals and alcohol tax to pay for transit service. Based on recent receipts, the Town anticipates that such a tax could raise more than $190,000 annually. The voters will be asked this March to levy such a tax for the sole purpose of funding transit service. The CCTA-Colchester Transit Working Group is also developing a long-range plan for providing transit service on other routes in Town.

Colchester is ensuring that transit infrastructure will be available within the growth center. As shown in Figures 4-5 and 4-6, a bus pull-off and shelter has been incorporated into the design of the Sunderland Corners PUD. The Town has already taken useful preliminary steps to prepare for eventual transit service through requirements in its zoning bylaw that set forth specific standards for transit infrastructure within individual developments in the growth center. The Town's development standards state (Attachment C-1: Colchester Zoning Regulations, Article 4, Section 4.03F2(c), Page 5):

> Bus stops and drop-off/pickup points should be considered as integral parts of the configuration…. Each establishment subject to these standards shall contribute to the establishment or enhancement of community and public spaces by providing at least two of the following: patio/seating area, pedestrian plaza with benches, transportation center, window shopping walkway, outdoor playground area, kiosk area, water feature, clock tower, or other such deliberately shaped area and/or a focal feature or amenity that, in the judgment of the Development Review Board adequately enhances such community and public spaces.

9.3. Present the best available information on the current condition, current level of service, and current and projected traffic on routes that will serve the proposed growth center.

The Route 2/7 – Blakely/Severance Road intersection, located in the middle of the growth center, is a major junction serving not just local traffic, but through-town commuter traffic as well. Route 2/7 is classified as a principal arterial, while Blakely/Severance Roads are deemed

collector roads. The intersection is signalized, with protected left turn phases to the signals and dedicated left turn lanes in all four approaches.

Current and accurate transportation information on existing conditions and future capacity has been compiled for the area within the growth center as part of the current development occurring there. The consulting firm, RSG, completed a series of studies for property owners in the proposed growth center to evaluate the impact their mixed-use projects would have on traffic at the intersection. (See Attachment A-4 and A-6).

In the most recent work, prepared in 2005 as part of the Ireland Industries Act 250 application for land in the growth center to the south of Severance Road and to the east of Route 2/7, RSG's analysis showed a modest growth in background traffic counts. Average daily traffic along the major roads and through the intersection will grow as the proposed growth center is built out over the next 20 years. The 2005 report indicates levels of service in the Route 2/7 intersection with Blakely/Severance Road, with outcomes one would expect at a rural crossroads that handles significant levels of peak a.m. and p.m. commuter loading.

RSG also completed a traffic safety analysis of the intersection in 2005 for Ireland Industries. The firm's findings identified only one change that would improve safety at the intersection, reduction of speed to 35 mph, as the land around it builds out. Traffic flow through the junction may be complicated by the proposed location of a Circ Highway interchange just to the south and east that will deposit traffic on both legs of the intersection, but the RSG analysis included a scenario with a full Circ build out.

A summary of RSG's analysis is presented below (Attachment A-4):

> The major highways in the study area are US 2/7, Severance Road, and Blakely Road. US 2/7 is classified as a principal arterial and is owned and maintained by the State of Vermont. The cross section of US 2/7 varies from two through lanes in each direction between I-89 and Rathe Road to one through lane in each direction north of Rathe Road. Additional turn lanes are provided at most of the major intersections.
>
> Severance and Blakely Roads are classified as collector roads. They are each class 2 town highways and are therefore owned and maintained by the Town of Colchester. The cross section of Severance and Blakely Roads includes one 11-foot wide through lane in each direction with 3 foot shoulders. Each road is also identified as a bike route.
>
> Table 2 lists the average annual daily traffic volumes on US 2/7, Severance Road and Blakely Road in the study area. Traffic volumes are highest on US 2/7 south of its intersection with Blakely and Severance Roads. The decrease in traffic volumes north of the Blakely and Severance Roads on US 2/7 occurs because the intersection disperses traffic to and from the town highway road system at this location.
>
> Table 3 lists the posted speed limits along US 2/7, Blakely Road, and Severance Road. Posted speed limits vary along US 2/7 from 30 mph to 50 mph. Advisory speed limits of 40 mph (reduced from 50 mph) are posted on the US 2/7 northbound and southbound approaches to the Severance

Road/Blakely Road intersection and on the southbound approach to the Sunderland Woods intersection.

Figure 9-2. Traffic Counts in the Growth Center (RSG Table 2)

Location	Count Station	Count Year	Average Annual Daily Traffic
US 2/7 south of Severance Blakely Roads[1]	D040	2004	14,500
US 2/7 north of Severance Blakely Roads[1]	D049	2004	10,300
Severance Road, 0.4 miles east of US 2/7[1]	D519	2003	8,800
Blakely Road, west of US 2/7[2]	D407	2003	9,800

[1] *Counts conducted by the Vermont Agency of Transportation*

[2] *Counts conducted by the Chittenden County Metropolitan Planning Organization*

Figure 9-3. Posted Speed Limits in the Growth Center (RSG Table 3)

Location	Speed Limit
US 2/7- I-89 Exit 16 to Mountain View Drive	30 mph
US 2/7- Mountain View Drive to Rathe Road	50 mph
US 2/7 Rathe Rd to north of Severance & Blakely Rd Intersection	50 mph
Severance Road	35 mph
Blakely Road	35 mph

AM and PM peak hour traffic volumes at the study intersections are based on traffic counts conducted at the study intersections on the dates shown in Table 5. The raw traffic counts are adjusted in two ways.

Figure 9-4. Intersection Turning Movement Counts (RSG Table 5)

	AM Peak		PM Peak	
Study Intersections	Date	Day of the Week	Date	Day of the Week
US 2/7-Severance-Blakely Rd[1]	6/4/2004	Friday	6/4/2004	Friday
US 2/7-Sunderland Woods Rd	N/A	N/A	8/21/2001	Tuesday
US 2/7-Rathe Rd	5/28/2003	Wednesday	5/28/2003	Wednesday
US 2/7-Hercules Dr	5/28/2003	Wednesday	5/28/2003	Wednesday
US 2/7-Lower Mt View Dr	5/28/2003	Wednesday	5/28/2003	Wednesday
US 2/7-I-89 NB Ramps	5/28/2003	Wednesday	5/28/2003	Wednesday
US 2/7-I-89 SB Ramps	5/28/2003	Wednesday	5/28/2003	Wednesday

[1] *Counts performed by the CCMPO. All other counts performed by VTrans.*

First, the AM and PM turning movement counts are adjusted to reflect the design hour volume (DHV) of traffic. The DHV is the 30th highest hour of traffic for the year and is used as the design standard in Vermont. All design hour adjustments employ data from Continuous Traffic Counter (CTC) D040, located on US 7 in Colchester between Sunderland Woods and the Severance/Blakely Road intersection. This counter records traffic volumes twenty-four hours per day. 365 days per year and therefore, provides a comprehensive picture of how traffic volumes vary throughout the year in the study area.

Figure 9-5. AADT at Station D040 and Growth Factors (RSG Tables 6 & 7)

		Growth Factors	
Year	**AADT**	**2007**	**2012**
2001	14,100	1.08	1.17
2002	14,200	1.07	1.16
2003	14,100	1.08	1.17
2004	14,500	1.05	1.14

The second adjustment accounts for increases in background traffic stemming from general regional growth between the year the count was conducted and the study years. These background growth factors are also based on VTrans CTC station D040. The most recent count data available for station D040 is through the year 2004. Intersection counts conducted prior to 2004 are adjusted to 2004 based on actual growth in the average annual daily traffic volumes measured at station D040 (see Table 6). As indicated in Table 6, traffic volumes have fluctuated on US 7 between 2000 and 2004. Adjustments from the base count to 2007 and 2012 were made using the long term growth factors developed by VTrans for station D040 as documented in the *2004 Red Book*. The growth factors developed by VTrans indicate a projected average annual growth in traffic of 1.6% per year. The total annual growth factors applied to the intersections are shown in Table 7.

Table 11 and Table 12 present the LOS results for the signalized and stop-controlled study intersections during the AM peak hour respectively. Table 13 and Table 14 present the LOS results for the signalized and stop-controlled study intersections during the PM peak hour respectively. Observations regarding the effect of the proposed development on LOS include the following:

- The proposed development does not cause a significant change in LOS at any of the study intersections during the 2007 and 2012 AM peak hours (See Table 11). V/C ratios at the stop-controlled intersection all remain less than 1.0 with and without traffic from the proposed project (See Table 12).

Figure 9-6. AM Peak Hour LOS Results for Signalized Study Intersections (RSG Table 11)

Intersection	2007 No Build LOS	2007 No Build Delay	2007 Build LOS	2007 Build Delay	2012 No Build LOS	2012 No Build Delay	2012 Build LOS	2012 Build Delay
US 7 - Blakely Rod - Severance Road								
Overall	D	37	D	37	D	38	D	42
WB, exiting Severance Rd	C	27	C	27	D	40	D	47
EB, exiting Blakely Rd	C	34	D	34	D	45	D	51
NB, along US 7	C	21	C	21	C	24	C	24
SB, along US 7	E	61	E	60	D	36	D	37
US 7 - Rathe Road								
Overall	A	4	A	4	A	4	A	4
EB, exiting Rathe Rd	C	30	C	33	C	33	C	33
WB, exiting Champlain Dr	C	30	C	33	C	33	C	33
NB, along US 7	A	2	A	1	A	1	A	1
SB, along US 7	A	3	A	2	A	2	A	2
US 7 - Hercules Drive								
Overall	A	3	A	2	A	2	A	2
WB, exiting Hercules Dr	C	31	C	34	C	34	C	34
NB, along US 7	A	1.0	A	0.5	A	0.5	A	0.5
SB, along US 7	A	3	A	2	A	2	A	2
US 7 - Mountain View Drive								
Overall	B	13	B	14	B	15	B	15
WB, exiting Lower Mt View Dr	C	32	C	33	C	33	C	33
EB, exiting exting Mt View Dr	B	17	B	17	B	16	B	16
NB, along US 7	B	13	B	11	B	11	B	11
SB, along US 7	B	12	B	16	B	18	B	18
US 7 - I89 Northbound Ramps								
Overall	B	12	B	13	B	13	B	13
WB, exiting I89 NB Ramps	C	27	C	30	C	29	C	29
NB, along US 7	A	8	A	8	A	7	A	7
SB, along US 7	A	5	A	4	A	5	A	5
US 7 - I89 Southbound Ramps								
Overall	B	19	B	20	C	22	C	23
EB, exiting I89 SB Ramps	C	26	C	29	C	30	C	31
NB, along US 7	C	28	C	29	C	35	D	35
SB, along US 7	A	9	A	9	A	7	A	8

Figure 9-7. AM Peak Hour LOS Results for Unsignalized Study Intersections (RSG Table 12)

Intersection	2007 No Build LOS	2007 No Build V/C	2007 No Build Delay	2007 Build LOS	2007 Build V/C	2007 Build Delay
Severance Road - Ireland Industries East						
WB left, entering development				A	0.05	9
NB left, exiting development toward US 7				E	0.40	36
NB right, exiting towards Mill Pond Rd				B	0.04	12
Severance Road - Ireland Industries West						
NB right, existing development				B	0.04	12
Blakely Road - Severance Village East						
WB left, entering Severance Village	A	0.05	9	A	0.05	9
NB right, existing development toward US 7	B	0.04	13	B	0.04	13
Blakely Road - Severance Village West						
WB left, entering Severance Village	A	0.05	9	A	0.05	9
NB left, existing toward Malletts Bay	C	0.08	24	D	0.09	25
NB right, existing development toward US 7	B	0.04	13	B	0.04	13
US 7 - Severance Village South						
EB right, exiting Severance Village	E	0.34	36	E	0.40	41

Intersection	2012 No Build LOS	2012 No Build V/C	2012 No Build Delay	2012 Build LOS	2012 Build V/C	2012 Build Delay
Severance Road - Ireland Industries East						
WB left, entering development				A	0.05	9
NB left, exiting development toward US 7				E	0.44	41
NB right, exiting towards Mill Pond Rd				B	0.04	12
Severance Road - Ireland Industries West						
NB right, existing development				B	0.04	12
Blakely Road - Severance Village East						
WB left, entering Severance Village	A	0.05	9	A	0.05	9
NB right, existing development toward US 7	B	0.04	13	B	0.04	14
Blakely Road - Severance Village West						
WB left, entering Severance Village	A	0.05	9	A	0.05	9
NB left, existing toward Malletts Bay	D	0.09	27	D	0.10	28
NB right, existing development toward US 7	B	0.04	13	B	0.04	14
US 7 - Severance Village South						
EB right, exiting Severance Village	E	0.38	42	E	0.42	49

- Any noticeable impact of proposed Ireland development during the PM Peak Hour is limited to the US 2/7 intersection with Blakely and Severance Roads.
    - During the 2007 Build scenario, LOS drops from D to E on the westbound Severance Road approach due to traffic from the proposed project. The impact can be mitigated by optimizing the traffic signal timing. With traffic signal timing optimization the LOS remains at D under the Build scenario.
    - During the 2012 Build scenario, LOS is projected to decrease from D to E on the westbound Severance approach. Under the 2012 No-Build scenario, the LOS is D with an average delay of 55 seconds/vehicle. This delay is just under the LOS D to E threshold of 55.1 seconds/vehicle. The LOS is projected to change to E with an average delay of 72 seconds/vehicle under the 2012 Build-Scenario if no modifications are assumed to the traffic signal timing. Assuming an optimized traffic signal timing plan, the LOS remains at D with average delay/vehicle of 50 seconds, five seconds better than No-Build conditions. Therefore, optimizing the traffic signal timing mitigates the impact of the project on the westbound Severance Road approach to US 2/7.
    - During all 2012 No-Build and Build scenarios, the US 2/7 southbound approach of US 2/7 to Severance/Blakely Road is projected to operate at LOS E. However, with traffic signal optimization, the average delay per vehicle is projected to decrease even when traffic from the proposed development is included.
- Because of its location near the four-way intersection of an arterial highway (US 2/7) and major collector roads (Severance Road and Blakely Road), traffic to and from the Ireland development is quickly divided and dispersed. As a result, the impact of the Ireland development along US 2/7 south of its intersection with Severance and Blakely Roads is minimized and negligible in the study area.
- The levels of service for vehicles turning left from the proposed east driveway of the Ireland development are projected to operate at LOS F under the 2007 and 2012 PM peak hour scenarios. For unsignalized intersections, VTrans considers the volume to capacity ratio a better estimate of operating conditions on stop-controlled approaches with a poor level of service. LOS F is acceptable for a side street when the volume to capacity ratio is less than 1.00. The volume to capacity ratio ranges from 0.68 to 0.71 for the left turn from the Ireland East driveway to Severance Road and is therefore acceptable.
- Table 14 shows a projected LOS of F and V/C ratio greater than 1.0 for the west most entrance on Blakely Road to the Severance Corners Village Center during the 2007 and 2012 No-Build and Build PM peak hour scenarios. As noted in the final traffic study for that project, the final plat approval from the town of Colchester requires

that a signal warrant analysis be conducted after Phase 1 of the Severance Road Village Center is completed and prior to issuance of a building permit for the fifth building. Table 15 presents the projected LOS during the 2012 PM peak hour for the No-Build and Build Scenarios assuming a traffic signal is installed at this intersection. With a traffic signal, LOS remains acceptable under the No-Build and Build scenarios.

- Level of Service F is projected at the stop-controlled Sunderland Woods approach to US 2/7 under all PM peak hour No-Build and Build scenarios. This LOS is caused by the large amount of through traffic on US 2/7 and is not attributable to the Ireland Industries' project.

The remaining roads within the growth center will be constructed by private developers to Town standards for public streets.

9.4. Address the capacity of the road network to accommodate increased traffic, specifically (a) identifying any infrastructure improvements that might be required by the state, municipality and/or private developers to accommodate increased traffic, and (b) discussing the steps the municipality is taking to plan for a transportation network that will be able to accommodate growth and development in a manner consistent with the goals of the growth center program.

The impact of planned development on Route 2/7 intersection with Blakely/Severance Road has been carefully analyzed during the project approval and permitting process. Important issues surrounding the impact of increasing traffic at this intersection include improvements to protect pedestrian crossings that will connect the four quadrants of the proposed growth center. Currently, a consultant is completing a study for the Town that will recommend capital improvements for the crossings.

The 2007 Severance Corners Transportation Plan (Attachment A-6), prepared by RSG, evaluated traffic operations, improvement options, cost estimates, and phased implementation plans at the Severance Corners intersection. The study presented two options – widening the highway to add turn-only lanes with associated traffic signals or redesigning the intersection as a roundabout. At this time, the Town has a stronger preference for the roundabout option. It should also be noted that the Circumfrential Highway, as currently designed, would require changes in the alignment of Severance Road, as shown in Figure 4-6.

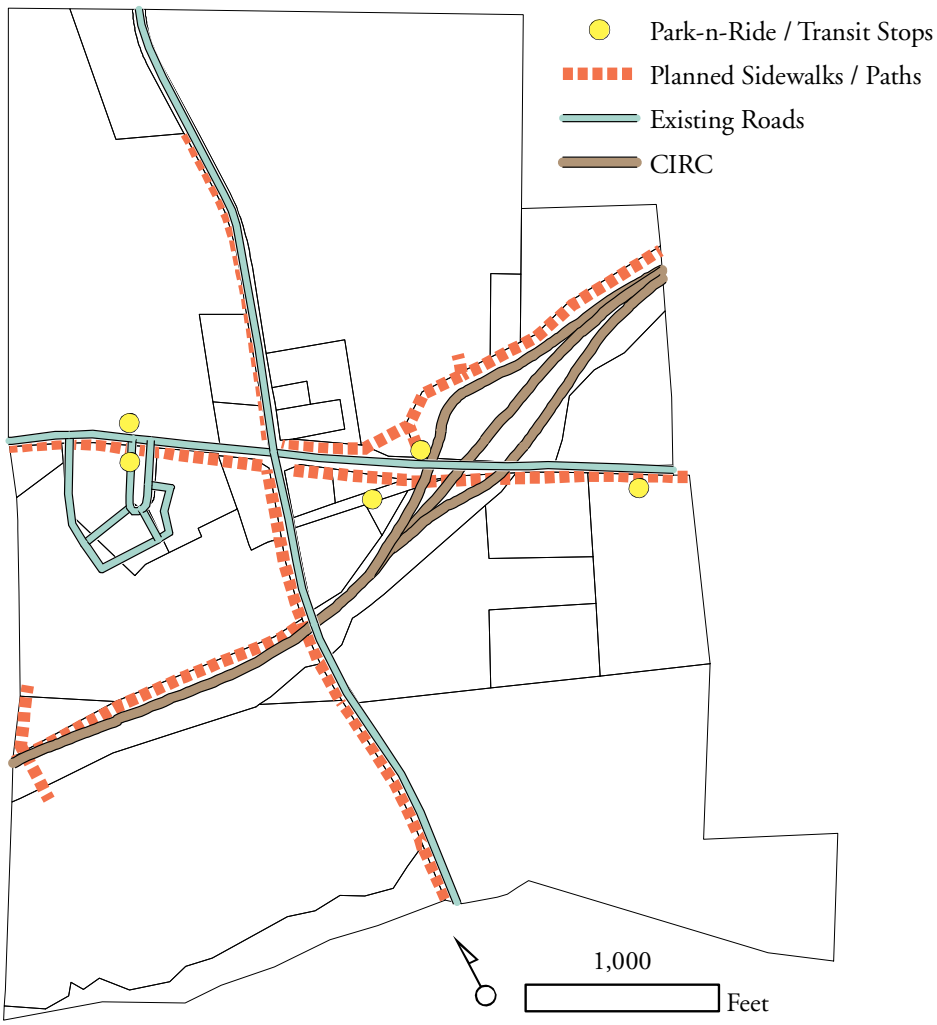
The Town has recognized that as the proposed growth center approaches build-out, improvements will be necessary at this intersection. Colchester will avoid the dilemma of uncertain VTrans funding for such improvements through a six-party Memorandum of Understanding signed August 28, 2007 by the Town and the five developers who own the property around the intersection (see Attachment C-9). Under this agreement, the costs for any improvements will be split six ways, with each party paying one-sixth of the total cost of the work. The

MOU ensures that the developers cannot fully build and occupy their projects until necessary improvements are made.

9.5 If the municipality has adopted an official map, summarize the planned transportation infrastructure delineated on the map within the proposed growth center.

Colchester's Official Map includes the following planned transportation infrastructure within the proposed growth center: proposed park-and-ride locations, a proposed separated bike/pedestrian path and the Circumferential Highway and associated on/off ramps (see Attachment B-3 and Figure 9-8).

Figure 9-8: Planned Transportation Infrastructure within the Growth Center



Prepared by PlaceSense, 23 Jan 2009

10.1. Identify the important natural resources (headwaters, streams, shorelines, floodways, rare and irreplaceable natural areas, necessary wildlife habitat, wetlands, endangered species, productive forest lands, and primary agricultural soils) located within the proposed growth center, assess potential impacts on those resources and describe the proposed mitigation.

Figures 10-1 through 10-3 indicate the known natural resources located within the growth center. For further discussion of agricultural soils see Section 11.

Other than Sunderland Brook, which forms the southern boundary of the growth center, there are no major water resources located within the growth center. There are several small streams, wetlands and ponds. A 23-acre portion of the stormwater impaired Sunderland Brook watershed crosses into the southeastern corner of the growth center. This 23-acre acre will remain undeveloped as part of the 50-acre natural area associated with the Sunderland Corners PUD. Several of the ponds within the growth center will be incorporated into the planned development, either as part of the site's stormwater management system and/or a visual/natural amenity. Several of the existing ponds are not natural and were constructed for agricultural purposes.

There are no mapped flood hazard areas within the proposed growth center. Colchester has been participating in efforts to identify and map fluvial erosion hazards along the town's streams. Given the geomorphic assessments completed thus far, there is no evidence that there are any significant fluvial erosion hazards within the growth center. Additionally, the town's stream buffer requirements, detailed below, are already serving to prevent development in areas that might be subject to fluvial erosion hazards and to maintain stabilizing woody vegetation along stream corridors.

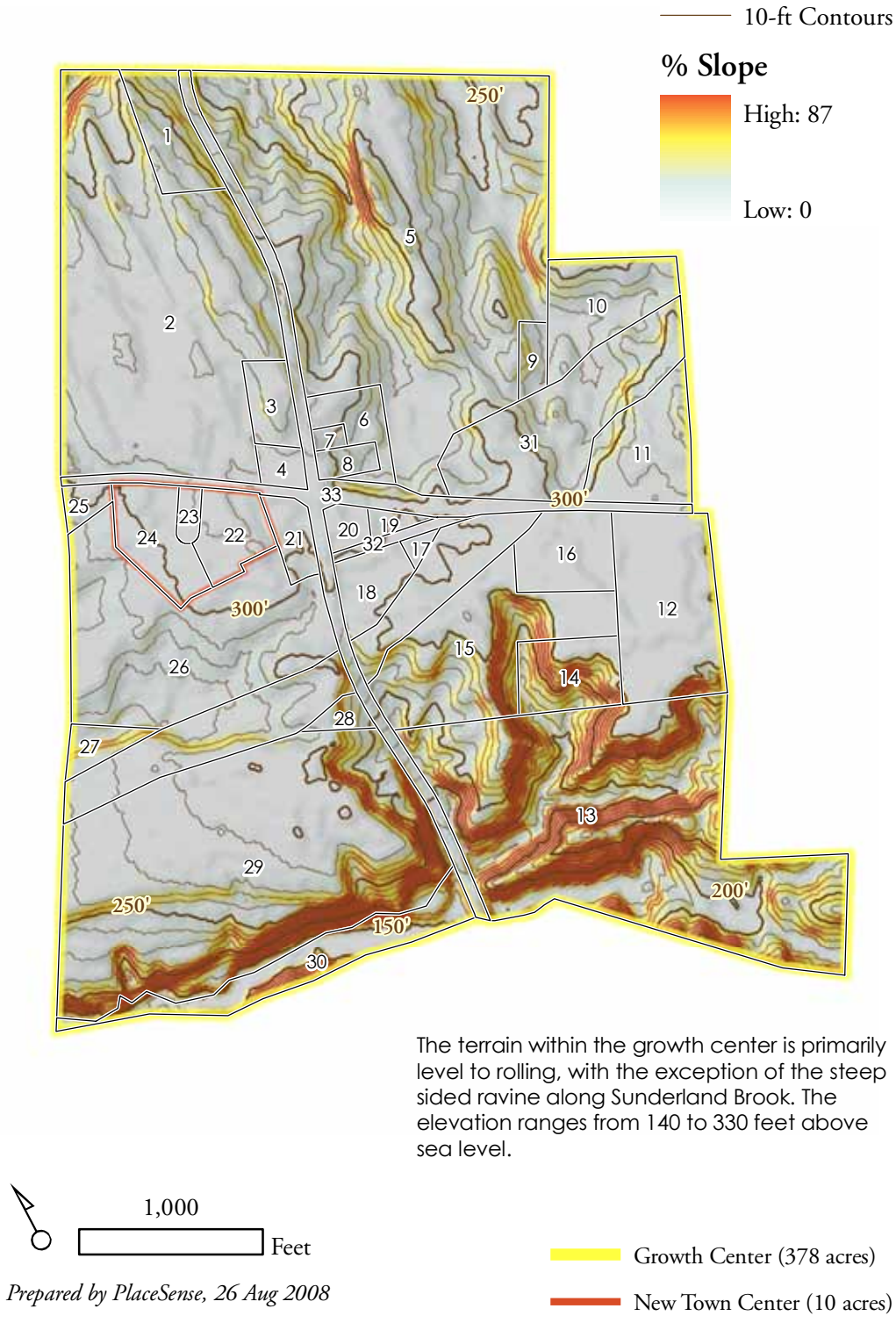
The three planned developments within the growth center have fully delineated and documented any wetlands existing on their associated lands. Two of the growth center's planned developments have already been permitted through the Vermont Wetlands Section, the Severance Corners PUD and the Owls Glen PUD. The permitting process is in progress for the third development, the Sunderland Corners PUD.

The Severance Corners PUD site had no Class Two wetlands, but does have two Class Three wetlands along the southern and western property boundaries. That project has been designed to largely avoid impacts to those wetlands as specified in the Act 250 decision approving the development.

The Class Two wetland and pond complex within the Sunderland Corners PUD is being restored as part of the development project. The condition of the wetland/pond area is currently compromised by the surrounding land use (nursery/farm). A plan has been prepared to remove garbage and debris from the area, and revegetate the buffer area with supplemental plantings. The goal of the restoration plan is to return the wetland/pond area to a more natural and functional ecosystem as shown in Figures 4-5 and 4-6.

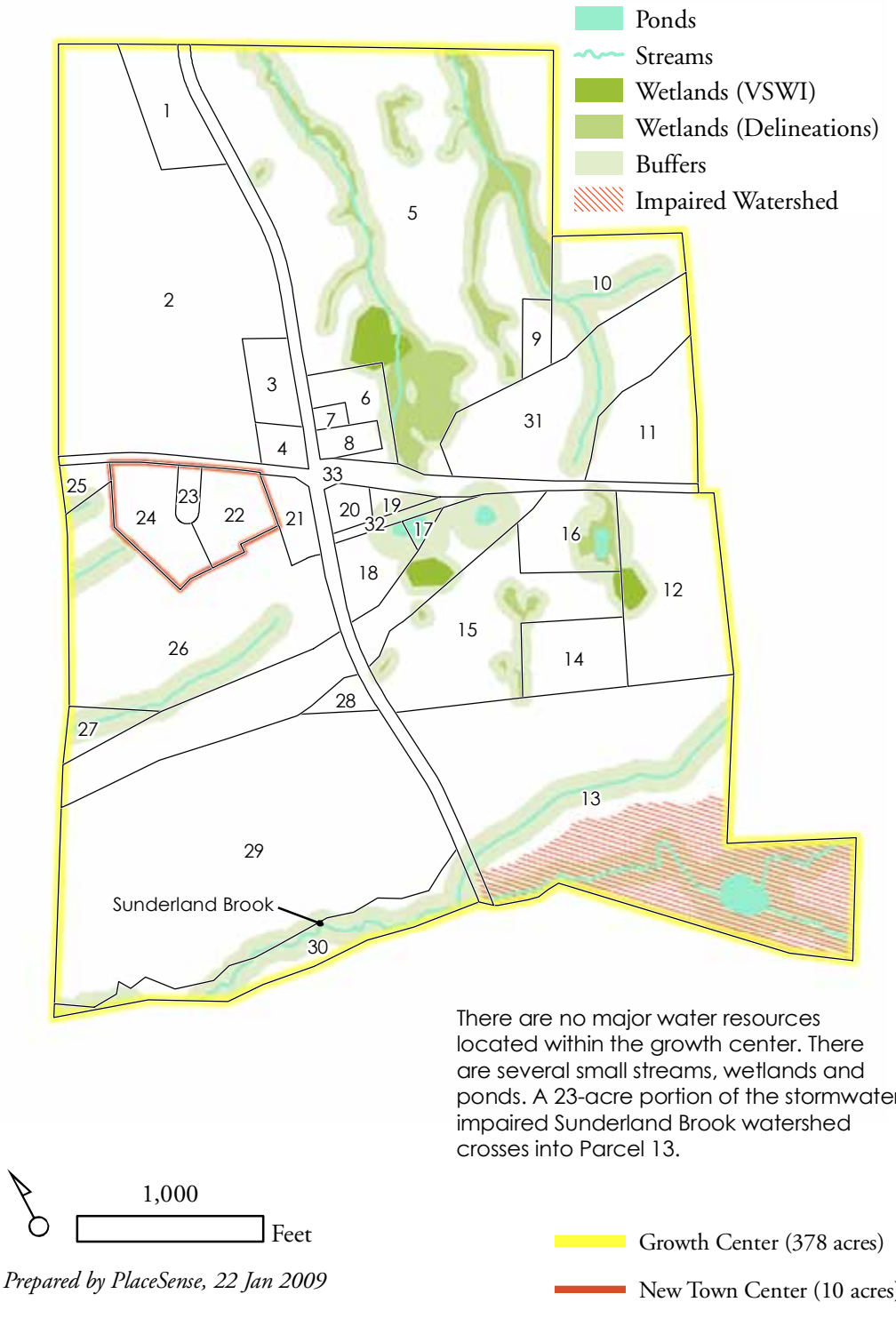
The Owl's Glen PUD includes larger Class 2 wetland areas along the tributaries of Crooked Creek that flow through the property, which resulted in significant reductions in density on the site. The project was designed to limit wetland impacts to the greatest extent feasible, but some impacts were unavoidable. The project received a conditional use determination in 2007

Figure 10-1: Landform and Slope Map



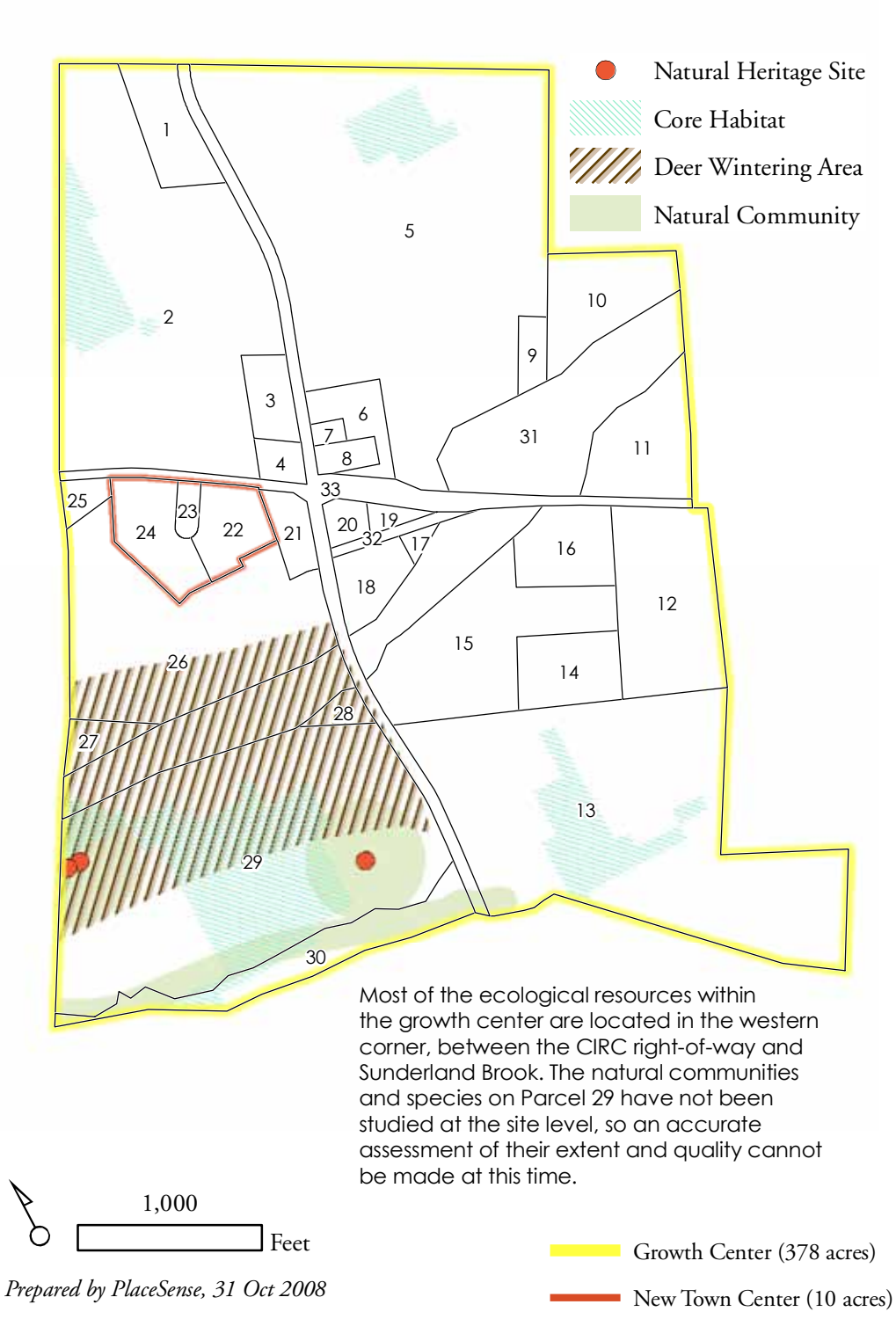
Prepared by PlaceSense, 26 Aug 2008

Figure 10-2 Water Resources Map



Prepared by PlaceSense, 22 Jan 2009

Figure 10-3: Ecological Resources Map



Prepared by PlaceSense, 31 Oct 2008

that approved impacts to around ½-acre of Class Two wetlands and around 4 acres of wetland buffer zone.

The southwestern corner of the growth center includes ecologically sensitive lands, primarily areas of the rare sand plains natural community and associated plant species. The State of Vermont has acquired some of the most ecologically sensitive land in this part of the growth center in order to mitigate the impacts to the sand plains natural community that would result from construction of the Circumferential Highway. The town's position in relation to the privately-owned 54-acre property located between the CIRC right-of-way and Sunderland Brook is presented in response to Question 2.2. That property includes sandplains, a deer wintering area and is within the buffer area of Sunderland Brook. Any development proposed for this parcel would be required to delineate and document the natural resources on-site, and would need to design a project that limited impacts to those resources to the greatest extent feasible. Given that the density allowed on the property under Colchester's zoning is based on buildable, rather than total, acreage, it is anticipated that the amount of development would be modest and have a compact footprint.

Colchester has adopted a Water Protection overlay district, which requires a minimum 85-foot vegetated buffer from streams and 50-foot vegetated buffer from wetlands (see Attachment C-1, Article 7, Section 7.04 Watershed Protection District, Pages 6-13).

7.04C. Surface Water Buffer Standards ("Stream Buffers")

1. Applicability. The requirements of this Section shall apply to all lands not developed with a single-family dwelling or duplex dwelling as of December 21, 2004, and not under the jurisdiction of the Development Review Board, and described as follows:

(a) All land within eight-five (85) feet horizontal distance of the center of the main channel of Allen Brook, Indian Brook, Malletts Creek, Pond Brook and Sunderland Brook and from the center of all tributaries of the above named streams and all other minor streams which shall be subject to the provisions of (b) below.

2. General standards. It is the objective of these standards to promote the establishment of heavily vegetated areas of native vegetation and trees in order to reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the Town's watercourses. Therefore, except as specifically permitted below and in Section 7.04C3 & 4, all lands within a required stream buffer defined above shall be left in an undisturbed, naturally vegetated condition. Supplemental planting and landscaping with appropriate species of vegetation to achieve these objectives shall be permitted. The specific standards for the vegetation and maintenance of stream buffers are as follows:

(a) No more than 25% of existing trees one inch caliper or greater shall be removed within 85 feet from the centerline of the stream within a ten year period. The Development Review Board may permit up to 40% of existing trees of one inch caliper or greater to be removed if it is determined that the removal of the trees will not

have adverse impact on the character of the area. Removal of dead trees or trees of immediate threat to human safety as well as reasonable pruning of existing trees is permitted. Removal of more than 40% of existing trees may be approved by the Development Review Board in conjunction with a permitted or conditional use within underlying districts.

(b) Any areas within a required stream buffer that are not vegetated or that are disturbed during construction shall be seeded with a naturalized mix of grasses rather than standard lawn grass, and shall not be mowed more than one (1) time per calendar year after establishment.

(c) The creation of new lawn areas within stream buffers is not permitted after December 21, 2004.

4. New uses and encroachments within stream buffers. The encroachment of new land development activities into the Town's stream buffers is discouraged.

7.04D. Wetland Buffer Standards

1. Applicability. The requirements of this Section shall apply to all of the following lands:

(a) Lands designated as Class I and II wetlands

(b) All lands within fifty (50) feet horizontal distance of the edge of a Class I and II wetland

(c) Initial assessment of a wetland location can be made by consulting the National Wetland Inventory map and the Overlay District Map. In the case of a conflict with the map, final assessment will be made by a wetland/aquatic biologist.

2. General standards. It is the objective of these standards to promote the establishment of heavily vegetated areas of native vegetation and trees in order to reduce the impact of stormwater runoff, reduce sedimentation, and increase infiltration and base flows in the Town's wetlands. Therefore, except as specifically permitted below, all lands within wetlands and required wetland buffers defined above shall be left in an undisturbed, naturally vegetated condition:

(a) Encroachment into Class I and II wetlands is permitted by the Town only in conjunction with issuance of a Conditional Use Determination (CUD) by the Vermont Department of Environmental Conservation and positive findings by the DRB pursuant to the criteria in Section 7.04D2(b) below.

Under the site plan provisions of the Town's Zoning Regulations, any development within the growth center would first be required to fully document and delineate the resources existing on site and propose a site plan that would protect those resources deemed significant to the greatest extent feasible. Site plans are required to show:

Location of watercourses, waterbodies, wetlands, floodplains, and floodplain boundaries as determined by the Federal Emergency Management Agency or as mapped by the Town of Colchester, rock outcrops, wooded areas, existing vegetation, and other significant natural features on the site. (Attachment C-1: Colchester Zoning Regulations, Article 8, Section 8.05D1(g), Page 4)

The Development Review Board must find that proposed development (Attachment C-1: Colchester Zoning Regulations, Article 8, Section 8.07, Page 8):

- Will not result in undue water or air pollution.
- Will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result.
- Will not have an adverse effect on historic sites or rare or irreplaceable natural areas.
- Will not have an undue adverse effect on scenic or natural beauty of the area or aesthetics.
- Will not adversely affect the character of the area.

Important natural resources elsewhere in Colchester have been protected through the Town's land use regulations and review process. Development on similarly sensitive sites would likely result in protection of additional natural areas.

For example, the Sunderland Corners PUD will result in 51 acres of open space, across Sunderland Brook from the town-owned Sunny Hollow natural area, being protected from development. A walking trail will allow public access to the resource as described in the Town's approval and finding of facts (Attachment C-5):

The total project area is 86.7 acres and the applicant proposed at least 51.43 acres or 59.31% of the project on Lot Seven to remain open. A path layout for Lot #7 is depicted on Plan L2.3. The location of the path utilizes existing 'logging roads' and will be left as it is found naturally due to the steep terrains of the land. There will be an addition of a small pedestrian bridge to cross an intermittent stream at the bottom of the valley and a small picnic area shown at the west end of a trail extension from building #11. The 'open land' will be owned by the Master Association and as such will be maintained by the Association as a common element shared between all members of the Association. The applicant is aware that the Town will not accept Lot #7 for public land.

10.2. Identify the historic resources located within the proposed growth center, assess potential impacts on those resources and describe the proposed mitigation, including any steps the municipality is taking to promote the preservation, restoration and/or adaptive reuse of historic structures within the proposed growth center.

There are no historic structures located within the growth center, however it is an area with known archaeological resources. There has already been considerable amount of research conducted with archaeological assessments and/or excavations undertaken at several locations within the growth center including those areas to be impacted by the Circumferential Highway and the three planned developments.

During an archaeological investigation of property that will be affected by the construction of the off-ramp for the proposed Circumferential Highway, researchers identified the first Late Paleoindian site (10,000-9,000 B.P.) in Vermont, and one of very few known to exist in the eastern United States, near Sunderland Brook. Archaeologists recovered fragments of several parallel-flaked spear point bases. Analysis suggested the site was a hunting camp where Native Americans removed and replaced spear points broken during hunts. Additional tools recovered suggested that animals may have been butchered and their hides prepared at the location.

As development proceeds, it is anticipated that additional archaeological assessments, research and/or excavations will be done as deemed necessary to adequately document the resources in areas to be disturbed. The Town Plan includes the following policy related to archaeological resources:

> Predictive modeling of archaeological sites should be explored by the Town as a tool to locate potentially important sites and assist developers in recognizing archaeological resources before final plans are developed and thereby reducing project costs. To the extent possible, the Town should encourage important archaeological sites be avoided and thereby preserved for future generations. (Attachment A-1, Page 38)

10.3. Explain the municipality's choices in locating the proposed growth center in relation to its potential impacts on important natural and historic resources.

The size of Colchester's growth center is compact and it successfully avoids most natural areas. While some impact on agricultural land is unavoidable, this impact will be mitigated by successfully restricting the extent of development beyond the growth center boundaries.

If the Circumferential Highway is completed through this part of Colchester, development will inevitably occur at the planned interchange. The Town is taking proactive steps to shape that development into a desirable pattern - a compact, pedestrian-friendly, high-density, mixed-use neighborhood.

It would be difficult to find an adequate amount of land to accommodate anticipated growth anywhere in Colchester that had fewer resource constraints than the selected location. Several

of the parcels with significant resources have been protected through state ownership or being set aside as open space within a planned development.

10.4. Summarize the provisions of the approved municipal plan and implementing bylaws that provide reasonable protection for important natural and historic resources located outside the proposed growth center.

The Colchester Town Plan includes provisions that provide reasonable protection for important natural and historic resources located outside the proposed growth center. Specifically, there are policies on pages 48-49 related to natural resources and on pages 38-39 related to cultural resources. The overall vision of the plan includes the following statements (Attachment A-1):

> The Town of Colchester should continue to conserve and protect its natural resources for their intrinsic value as well as for their importance to quality of life within the community.
>
> The Town should continue to preserve and maintain its diverse cultural and historic resources while encouraging the development of new cultural amenities and traditions.

Colchester adopted an Open Space Plan in 2000, which includes specific recommendations for natural resource protection (see Attachment A-7).

The Town's regulations include provisions within the site plan, conditional use, PUD and subdivision standards to ensure that development will not have an undue adverse effect on historic sites or rare and irreplaceable natural areas (see response to Question 10.1). The Town has an Historic Preservation overlay district, which governs development within the Fort Ethan Allen National Register Historic District (see Attachment C-1, Section 7.05, Pages 10-13). For further discussion of provisions related to agricultural resources, see Section 11.

11.1. Justify the municipality's choices in locating the proposed growth center in relation to the conversion of primary agricultural soils and the fragmentation of farm or forest land.

Colchester's proposed growth center will have a minimal impact on the total amount of primary agricultural soils and productive farmland in Town. As shown in Figure 11-1, the proposed growth center includes 174 acres of primary agricultural soils (24 acres classified as prime and 152 acres classified as having statewide significance). This is less than 1.5 percent of the total amount of primary agricultural soils in Town. Further, approximately 30 of those 174 acres of primary agricultural soils had been impacted by development before construction began within the New Town Center and another 20 acres are within the CIRC right-of-way.

Given that 51 percent of Colchester's land area contains important agricultural soils, it is unlikely another suitable location could be found in Town for a growth center that would have significantly less area of agricultural soils.

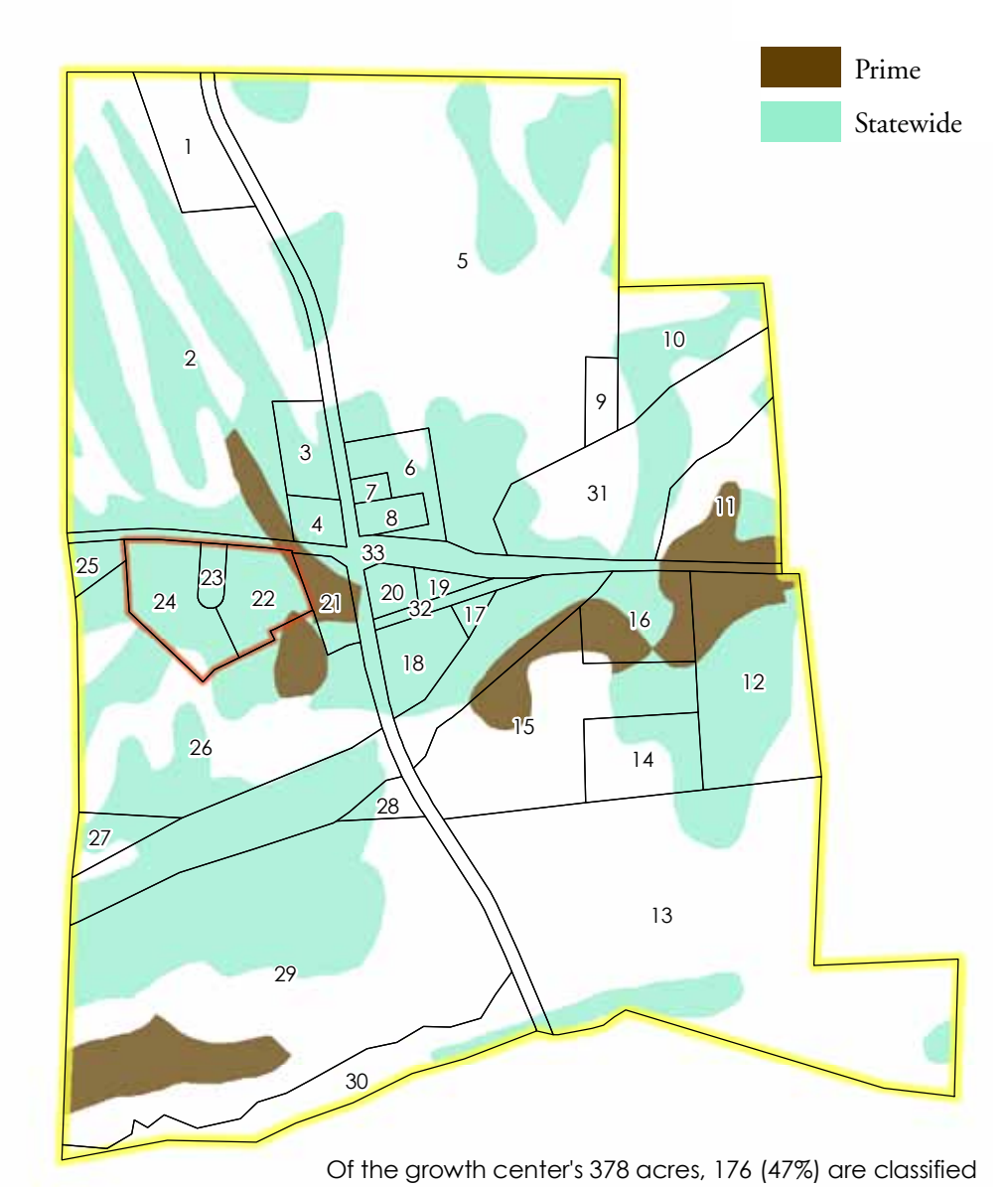
There are no commercial farms still operating within the growth center. Claussen's Florist and Greenhouse currently operates its Perennial Farm on a five-acre parcel, which will be redeveloped as part of the Sunderland Corners PUD. Before the Severance Corners PUD began construction, there were approximately 70 acres of land in productive agricultural use within the growth center. Approximately 20 acres was used for row crops and the remaining 50 acres were used for hay.

11.2. Identify any ways in which the proposed growth center will serve to strengthen agricultural and forest industries (to the extent that they exist) and discuss the steps the municipality is taking to minimize conflicts between development and agricultural and forest industries (to the extent that they exist).

The compact size of the proposed growth center serves to strengthen agricultural and forest industries elsewhere in Town by reducing development pressure on those lands. When fully implemented, the Town's transfer of development rights program should result in conservation of working lands in more rural parts of Town. Designation of the growth center is anticipated to strengthen the Town's TDR provisions through creation of a viable sending area for higher-density development.

Around half of Colchester's 12,000 acres of primary agricultural soils have already been developed. Around 3,000 acres of primary agricultural soils are located in the Agricultural (1,500 acres), Floodplain (1,200 acres) or Residential Ten (300 acres) zoning districts, all of which emphasize preserving agricultural use. Estimating from 2002 land cover imagery, there is around 8,000 acres of cultivated or pasture land in Colchester (around 35 percent of the town's land area). Currently, there is only one conserved farm in Colchester, the 100-acre Button farm just to the north of the growth center. The Town envisions this figure increasing significantly through its TDR program. The growth center has the potential to accommodate from 420 to 780 transferred development rights, which translates to 280 to 520 acres of conserved farmland.

Figure 11-1: Agricultural Soils Map



Of the growth center's 378 acres, 176 (47%) are classified as primary agricultural soils. That includes 24 acres of prime soils and 152 acres with soils of statewide significance. The 176 acres of primary ag soils within the growth center represent less than 1.5% of the total acreage of ag soils in Colchester.

1,000 Feet

Growth Center (378 acres)

New Town Center (10 acres)

Prepared by PlaceSense, 25 Aug 2008

The Sunderland Corners PUD includes a colonnade that will serve as an open-air market. It is anticipated that a farmer's market will be held regularly from this location, providing local farmers an opportunity to sell their products directly to consumers.

Given the growth center's location, the Town does not anticipate any increased conflict between development and agricultural or forest industries. The nearest commercial farms are located about a mile from the growth center on Mill Pond Road and west of the interstate on Blakely Road.

11.3 Describe the provisions of the approved municipal plan and implementing bylaws that limit or discourage the fragmentation of farm and forest land.

Colchester's Town Plan includes policies that discourage the fragmentation of farm and forest land. The land use plan establishes two planning areas, which together include most of the Town's productive farmland (Attachment A-1):

> Rural Planning Area. These areas generally are distant from facilities and services and tend to be open and sparsely developed. Agricultural uses and low density residential uses are compatible land uses within these areas that often include significant natural resources, prime agricultural soil, and other characteristics that generally make these areas unsuitable for development. Some limited silviculture activities, such as firewood operations, also occur within these areas although these activities tend to be small and informal. Extension of municipal infrastructure to these areas will be a low priority, and may not be permitted. (Page 8)
>
> Agriculture / Mixed Use Planning Area. This area consists of the agricultural lands located along Malletts Bay Avenue and Lavigne Road, at the top of Shipman Hill. This area's unique characteristic is the farming community located within its boundaries. These farms are an important part of Colchester's economy, community character and heritage; the Town seeks to retain and support these farms. Land use planning for this area should promote the continued agricultural use of this area while respecting property owners' needs to access the equity in their land. Given the current State Primary Agricultural Soils, there are limited options as to what can be developed within this area. The Planning Commission should continue to work with property owners to develop a comprehensive land use plan that balances continued agricultural use with property owners' needs and also includes opportunities for agricultural tourism and the commercial elements that are necessitated by the changing face of agriculture. The Town should also encourage the work of land trusts within this area to provide land owners with fair compensation for their development rights. (Page 9)

Colchester also has an adopted Open Space Plan, which includes the following description of agriculture in Town. The plan also identifies several farm parcels as priorities for preservation (Attachment A-7).

> Agriculture is also an activity that contributes significantly to Colchester's open space. Dairy farming, that has historically been the backbone of Vermont agriculture, has declined throughout much of Chittenden County in recent years. Despite close proximity to Burlington, a number of Colchester's dairy farms remain active. Chittenden County's largest fruit, vegetable, and egg farms continue to operate in the Shipman Hill area – overlooking the Intervale, with Burlington less than a mile away. In addition to wholesale commercial operations, these businesses continue to offer farm stands and "pick-your-own" crops; a refreshing contrast to the megabox retailers that dot much of Chittenden County. Colchester is also home to Vermont's two largest greenhouse operations. The open spaces of horse farms, primarily on Middle Road and East Road, but also dotted elsewhere throughout town, add pastoral landscapes and recreational activities for residents and visitors alike. (Page 1)

The Town of Colchester has an Agricultural zoning district that encompasses much of the Town's productive agricultural land. The district includes 4,667 acres (20 percent of the Town's land area) and states the following purpose (Attachment C-1: Colchester Zoning Regulations, Article 6, Section 6.01A, Page 1):

> To maintain, preserve and enhance agricultural lands, uses and rural character of the Town of Colchester and to protect soil, water, and other natural resources, to maintain, preserve and enhance open space lands and to protect these lands from suburban development.

This district has a low density of one dwelling per 25 acres. However, lots as small as one acre may be created through subdivision in order to discourage fragmentation of farmland through the creation of 25-acre lots. The Town Plan states the following:

> The minimum requirement of 25 acres per dwelling unit in the Agricultural District is in keeping with the Rural Planning Areas' goal to be open, sparsely developed and low-density. This District, due to its high minimum lot size requirement, is very effective at conserving open space and overall rural character. (Page 46)

Further subdivision of three or more lots or construction of three or more dwelling units within a 10-year period in the Agricultural District are reviewed under the Town's PUD provisions. This requirement allows dwelling units to be clustered and protects larger parcels of contiguous open space.

Within the Agricultural district most residential uses are allowed, but commercial uses are limited primarily to agricultural-support or resource-based activities like commercial greenhouses, animal services, outdoor recreation, stables, mining and wood processing.

Immediately to the north of the growth center, the Vermont Land Trust has conserved the approximately 100-acre Button Farm. The Town fully supports further conservation of farmland in the agricultural areas of Town. The Town Plan states:

> The Town should also encourage the work of land trusts to provide land owners with fair compensation for their development rights. A local land bank that could purchase development rights for fair value should also

be encouraged. To this end, the Town may consider establishing a local development rights bank either within the local government or associated organizations such as the Colchester Land Trust. (Page 9)

12.1. List the dates of the most recent plan adoption, bylaw amendment(s), and municipal plan approval and confirmation of the municipality's planning process by the regional planning commission.

The Selectboard most recently adopted the Colchester Town Plan (Attachment A-1) on July 10, 2007. Chittenden County Regional Planning Commission approved the plan and most recently confirmed the Town's planning process on June 25, 2007.

Colchester's Zoning Bylaws (Attachment C-1) were most recently amended by a vote of the Selectboard on September 17, 2008. The Selectboard most recently adopted the Subdivision Regulations (Attachment C-2) on July 22, 2008.

12.2. Highlight any additional steps the municipality is taking to implement the purposes of the growth center program that have not been discussed in previous responses, specifically those that relate to the purposes of 10 V.S.A. Chapter 151 or the goals of 24 V.S.A. § 4302.

The responses to the previous questions have adequately described the steps Colchester is taking to implement the purposes of the growth center program.